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Terms	Documents
glutamine adj synthetase.ab. and transformation.ab. and plant.ab.	0

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<u>L6</u>	glutamine adj synthetase.ab. and transformation.ab. and plant.ab.	0	<u>L6</u>
<u>L5</u>	glutamine adj synthetase.ab. and transformation and plant.ab.	7	<u>L5</u>
<u>L4</u>	glutamine adj synthetase and transformation and plant.ab.	429	<u>L4</u>
<u>L3</u>	glutamine adj synthetase and transformation and plant	558	<u>L3</u>
<u>L2</u>	glutamine adj synthetase and transformation	681	<u>L2</u>
<u>L1</u>	glutamine adj synthetase and 35s and npt and pbin	0	<u>L1</u>

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Terms	Documents
populus adj tremula	7

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Database: IBM Technical Disclosure Bulletins

Search:

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<u>L4</u>	populus adj tremula	7	<u>L4</u>
<u>L3</u>	populus adj tremula and populus adj alba	0	<u>L3</u>
<u>L2</u>	inra adj 717	0	<u>L2</u>
<u>L1</u>	inra adj 717 and populus and transformation	0	<u>L1</u>

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NEWS 5 Feb 10 Access via Tynnet and SprintNet Eliminated Effective 3/31/02
NEWS 6 Mar 01 Gene Names now available in BIOSIS
NEWS 7 Mar 01 TOXKIT no longer available
NEWS 8 Mar 01 TOXICEMO no longer available
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NEWS 21 Jun 01 PCTFUL has been reloaded

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=> s expression(w)cassette and glutamine(w)synthetase and transform?

L1 3 EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHETASE AND TRANSFORM
?

=> d 11 1-3

L1 ANSWER 1 OF 1 CALLUS COPYRIGHT 2000 ACS

AN 2000:153804 CAPLUS

DN 132:162019

TI Poplar trees containing a constitutively expressed pine **glutamine synthetase** transgene for improved nitrogen metabolism

IN Kirby, Edward G.; Canovar-Ramos, Francisco; Gallardo Alba, Fernando

PA Rutgers, The State University of New Jersey, USA

SO PCT Int. Appl., 50 pp.

CODEN: PIXXD2

BT Patent

LA English

FAN.CNT

	PATENT NO.	FILE	DATE	APPLICATION NO.	DATE
PI	WO 2000018726	A1	20000204	WD 1999-US18267	19990311
W:	AE, AI, AM, AT, AU, AV, BA, BB, BG, BE, BY, CA, CH, CN, CR, CU, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, MY, NA, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, SM, TM, TR, UA, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, EG, ES, MD, RU, TM, TM				
RW:	BH, BM, KE, LS, MW, SD, SI, SZ, US, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GE, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, HE, ML, MR, NE, SN, TD, TG				
	A1 1997751	A1	20000306	A1 1999-57134	19990311
PRAI	US 1998-96031P	P	19980111		
	WO 1999-018167	W	19990311		

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 2 OF 1 CALLUS COPYRIGHT 2000 ACS

AN 1999:166715 CAPLUS

DN 130:219139

TI Engineering fumonisin mycotoxin resistance with Saccharomyces DNA sequences encoding an ABC transporter

IN Osoeid, Lina H.; Boss, Wendy F.; Mao, Cungui

PA North Carolina State University, USA

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

BT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9916514	A1	19990304	WO 1999-001346	19990325
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, FR, GE, GH, GM, GR, HU, ID, IL, IS, JP, KR, KG, KI, KM, KZ, LC, LR, LP, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NA, NE, NL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RN:	GB, HU, PE, LS, MW, SP, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, DA, GN, GW, ML, HR, NE, SN, TD, TG			
	AU 983919	A1	19990316	AU 1998-89190	19980325
PRAI	US 1997-005619	P	19970816		
	WO 1998-0017546	W	19980815		

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS

AN 1998-0103-0 CAPLUS

DN 122:2/150

T1 Vectors and methods for site-specific integration of **transforming** DNA in mammalian cells

IN Reiff, Mitchell E.; Barnett, Richard Spence; Molachlan, Karen Betta

SA IDEC Pharmaceuticals Corp., USA

SO PCT Int. Appl., 114 pp.

CODEN: PIXXL2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9841646	A1	19980324	WO 1998-033935	19980309
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, FR, GE, GH, GM, GR, HU, ID, IL, IS, JP, KR, KG, KI, KM, KZ, LC, LR, LP, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NA, NE, NL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, EG, KZ, MD, RU, TJ, TM			
	RN:	GB, HU, PE, LS, MW, SP, SZ, UG, ZW, AT, BE, CH, IE, IK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, DA, CN, ML, MR, NL, SN, TD, TG			
	US 9706694	A	19981113	US 1997-019466	19970314
	US 9708144	A	19991207	US 1998-033935	19980213
	AU 9804415	A1	19981112	AU 1998-64435	19980309
	AU 787151	B2	19910309		
	EP 981637	A1	19990311	EP 1998-010109	19980309
	R:	AT, BE, CH, IE, LR, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
	BR 9808554	A	19990113	BR 1998-0584	19980309
	JP 2001516211	T2	20010925	JP 1998-040639	19980309
	NO 9804347	A	19981109	NO 1999-4397	19990910
PRAI	US 1997-019466	A	19970314		
	US 1998-033935	A	19980213		
	WO 1998-033935	W	19980309		

=> s expression(w)cassette and glutamine(w)synthetase and plant

L2 2 EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHETASE AND PLANT

=> a 12 1-2

L1 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

AN 1998-0103-0 CAPLUS

DN 133:162039
 TI Poplar trees containing a constitutively expressed pine **glutamine synthetase** transgene for improved nitrogen metabolism
 IN Kirby, Edward G.; Canovas Ramos, Francisco; Gallardo Alba, Fernando
 PA Rutgers, the State University of New Jersey, USA
 SO PCT Int. Appl., 50 pp.
 CODEN: PINXDD

DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000054724	A1	20 00124	NO 1999-US14267	19990811
W:	AM, AL, AN, AT, AU, AZ, BA, BB, BG, BE, BY, CA, CH, CN, CR, CU, CC, DE, DF, DM, EE, EG, FI, GB, GD, GE, GH, GM, HP, HU, ID, IL, IN, IS, JI, KE, KI, KF, KG, LK, LG, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NC, NE, NZ, PL, PT, RG, RI, SD, SE, SG, SI, SK, SL, TC, TM, TE, TI, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AR, BY, KG, MD, ME, RU, TI, TM RW: GH, GM, KE, LS, MK, SI, SL, SZ, UG, ZW, AF, BE, CH, CY, DE, DK, EG, FI, FR, GB, GR, IE, IT, LU, MC, NI, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, MD, MR, NE, SN, TD, TG				
	AU 9957134	A1	2000036	AU 1999-57734	19990811

PRAI US 1998-9803LP P 1998011
 WO 1999-US1837 W 1999011

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2001 ACS
 AN 1999:160745 CAPLUS
 DN 199:21931
 TI Engineering *Samon* sin myopectin resistance with *Saccharomyces* DNA sequences encoding an ABC transporter
 IN Obeid, Lina M.; Bess, Wendy F.; Mao, Junqiu
 PA North Carolina State University, USA
 SO PCT Int. Appl., 51 pp.
 CODEN: PINXDD

DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9910514	A1	1999104	WO 1998-US17546	19980125
W:	AI, AM, AT, AU, AZ, BA, BB, BG, BE, BY, CA, CH, CN, CU, CZ, DE, EG, EI, ES, FI, GB, GE, GH, GM, HP, HU, IL, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NG, NT, NL, NO, NZ, PL, PT, RG, RI, SD, SE, SG, SI, SK, SL, TC, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AR, AZ, BY, BG, KZ, MD, RU, TJ, TM RW: GE, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, IL, MR, NE, SN, TD, TG				
	AU 988910	A1	1999016	AU 1998-89190	19980325

PRAI US 1998-05LP P 19980126
 WO 1998-US17546 W 19980125

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s planr(w)expression(w)cassette and glutamine(w)synthetase
 L3 (PLANR(W) EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHETASE

=> s plant(w)expression(w)cassette and glutamine(w)synthetase
 L4 (PLANT(W) EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHETASE

SINCE FILE	TOTAL
ENTRY	SESSION
40.77	40.68

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ENTRY	SESSION
0.24	41.22

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 $\Rightarrow d = 15$

SN 132:196616
 TI Expression of chitin synthase and chitin deacetylase genes in plants to
 alter the cell wall for industrial uses and improved disease resistance
 IN Dhugga, Kamarpal S.; Anderson, Paul C.; Nichols, Scott E.
 PA Pioneer Hi-Bred International, Inc., USA
 SO ECI Int. Appl., 51 pp.
 COPEN: R1X3.2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000018718	A2	20000124	WC 1999-US18450	19990818
	WO 2000018722	A3	20000111		

[illegible]

	AF	AN	GA	GN	GW	AL	BR	NE	ON	TE	
AF	8888610					A1	20000806		AN	1999-88610	19990813
AN	1999-88610					B	19990814				
GA	1999-88610					C	19990815				

=> s plant(w)expression(w)cassette and glutamine(w)synthase and transform?
 L6 3 PLANT(W) EXPRESSION(W) CASSETTE AND GLUTAMINE(W) SYNTHASE AND
 TRANSFORM?

=> n plant(w)expression(w)cassette and transform?
 L7 41 PLANT(W) EXPRESSION(W) CASSETTE AND TRANSFORM?

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 L8 19 DUPLICATE REMOVE L7 416 DUPLICATES REMOVED

=> d 18 1-29

L8 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 2002:332302 CAPLUS
 DN 136:3045 0
 TI Expression cassettes using the myb11 promoter of Arabidopsis for
 tissue-specific expression of foreign genes in the embryonic epidermis and
 flower of plants
 IN Reindl, Andreas; Bischoff, Friedrich; Tonelli, Chiara; Petroni, Katia
 PA Basic Plant Science GmbH, Germany
 SO PCT Int. Appl., 64 pp.
 CODEN: PIKXDL
 DT Patent
 LA German
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002034924	A2	20020502	WO 2001-EP12444	20011026
W: AE, AG, AL, AM, AN, AU, AZ, BA, BB, BC, BR, BY, BE, CA, CH, CN, CO, CU, CZ, DE, DK, DM, DO, EC, EE, EG, FI, GB, GR, GU, HK, HU, IE, IL, IN, IS, JP, KR, KZ, LC, LK, LR, LU, LV, MA, MG, MK, MN, MU, MV, MY, NZ, OM, PA, PE, PG, PH, PK, PT, RU, SC, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AU, AT, BE, CH, CY, CZ, DE, DK, EE, EG, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, EC, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10053519	A1	20020502	DE 2000-10053519	20001027
PRAI DE 2000-10053519	A	20001027		

L8 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 2002:332302 CAPLUS
 DN 136:3045 0
 TI A barley-specific promoter of wheat for use in the tissue-specific
 expression of foreign genes in cereal
 IN Sprunck, Melanie; Kluth, Antje; Becker, Dirk; Luetticke, Stephanie;
 Lorenz, Horst
 PA Aventis CropScience GmbH, Germany
 SO PCT Int. Appl., 51 pp.
 CODEN: PIKXDL
 DT Patent
 LA German
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032785	A1	20020110	WO 2001-EP7592	20010703
W: AE, AG, AL, AM, AN, AS, BA, BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, LM, DZ, EC, EE, EG, GE, HR, HU, ID, IL, IN, IS, JP, KR, KP, KR, KZ, LC, LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, NO, NZ,				

PL, PO, PY, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN, YU, ZA, AM,
 AZ, BY, EG, KZ, ME, PU, TJ, TM
 RW: BR, CK, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

DE 19032379 A1 20020117 DE 2000-10032379 20000117
 DE 10041861 A1 20020314 DE 2000-10041861 20000314
 PRAI DE 2000-10032379 A 20000706
 DE 2000-10041861 A 20000826

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 1
 AN 2001:186123 BIOSIS
 DN PREV200100186123
 TI Plant-derived measles virus hemagglutinin protein induces neutralizing
 antibodies in mice.
 AU Huang, Z.; Dry, I.; Webster, I.; Strugnell, R.; Wesselingh, S. (1)
 CS (1) Infectious Diseases Unit, Alfred Hospital, Monash University,
 Commercial Road, Prahran, VIC, 3181; s.wesselingh@alfred.org.au Australia
 SO Vaccine, 18 February, 2001 Vol. 19, No. 15-16, pp. 2163-2171. print.
 ISSN: 0264-1154.
 DT Article
 LA English
 SL English

L8 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2001 ACS
 AN 2000:861811 CAPLUS
 DN 134:26874
 TI Maize P881 promoter and methods for its use in plant
 transformation
 IN McElroy, David; Orozco, Emil M., Jr.; Kriz, Alan L.; Griffor, Matt
 PA Dekala Genetics Corporation, USA
 SO PCT Int. Appl., 142 pp.
 CODEN: PIXXOR
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	FIND	DATE	APPLICATION NO.	DATE
US 2000013474	A1	20001207	US 2000-US13199	20000512
WI: AE, AG, AI, AM, AN, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GE, GR, GM, HR, HU, IS, IL, IN, JP, KE, KG, KP, KR, KZ, LC, LK, LF, LS, LT, LU, LV, MA, MD, ME, MK, MN, MW, MX, MY, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AO, AS, AU, BA, BB, BG, BR, BY, CA, CH, CN, CR, RW: BR, CK, KE, LS, MW, MZ, SD, SL, SE, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6222516	B1	20010515	US 1999-512038	19990514
PRAI US 1999-512038	A1	19990514		

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:P24450 CAPLUS
 DN 133:389796
 TI Maize P881 promoter and methods for its use in plant
 transformation
 IN McElroy, David; Orozco, Emil M., Jr.; Laccetti, Lucille B.
 PA Dekala Genetics Corporation, USA
 SO PCT Int. Appl., 173 pp.

CODEN: P1XXD2

DT Patent
LA English
FAN.CNT 1

PATENT NO.	FIND	DATE	APPLICATION NO.	DATE
WO 20000970068	A1	20001123	WO 2000-US13304	20000512
W: AE, AG, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UU, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				
US 6207879	B1	20010317	US 1999-312266	19990514
EP 1179074	A1	20020213	EP 2000-942636	20000512
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, FO				
PRA1 US 1999-312266	A1	19990514		
WO 2000-US13304	W	20000512		
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L8 ANSWER 6 IF 29 CAPLUS COPYRIGHT 2002 ACS

AN 2000:824479 CAPLUS

DN 133:359798

TI The rice Actin 2 promoter and intron and their use for plant transformation

IN McElroy, David; Wu, Ray

PA Dekalb Genetics Corporation, USA; Cornell Research Foundation, Inc.

SO PCT Int. Appl., 150 ps.

CODEN: P1XXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	FIND	DATE	APPLICATION NO.	DATE
WO 20000970068	A1	20001123	WO 2000-US13303	20000512
W: AE, AG, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UU, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				
EP 1179074	A1	20020213	EP 2000-942636	20000512
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, FO				
PRA1 US 1999-312266	A1	19990514		
WO 2000-US13303	W	20000512		
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L8 ANSWER 7 IF 29 CAPLUS COPYRIGHT 2002 ACS

AN 2000:824478 CAPLUS

DN 133:359744

TI Maize RS834 promoter and methods for its use in plant transformation

IN McElroy, David; Trozco, Emil M., Jr.; Laccetti, Lucille B.

PA Dekalb Genetics Corporation, USA

PCT Int. Appl., 17 pp.
CODEN: PEXXDE
TI Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000/0065	A1	20001123	WO 2000-US18301	20000512
W: AF, AG, AH, AM, AT, AU, AZ, BA, BE, BG, BR, BY, CA, CH, CN, CP, CU, CZ, DE, DK, DM, DO, EE, ES, FI, GB, GD, GE, GH, GM, GN, GR, GU, HA, HB, HC, HD, HE, HF, HG, HH, HI, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				
US 619461	B1	20010107	US 1999-31285	19990514
EP 117901	A1	20020113	EP 1000-937856	20000512
P: AI, BA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CL, CM, CN, CO, CP, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				
US 1999-31285	A1	19990514		
WO 2000-013101	W	20000512		

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 2000:133867 CAPLUS
DN 132:176616
TI Expression of chitin synthase and chitin deacetylase genes in plants to alter the cell wall for industrial uses and improved disease resistance
IN Daugga, Ranwarpal S.; Anderson, Paul C.; Nicols, Scott E.
PA Pioneer Hi-Fred International, Inc., USA
SO PCT Int. Appl., 51 pp.
CODEN: PEXXDE

DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000/0972	A2	20000524	WO 1999-US18450	19990813
WO 2000/0972	A3	20000524		
W: AF, AG, AH, AM, AT, AU, AZ, BA, BE, BG, BR, BY, CA, CH, CN, CP, CU, CZ, DE, DK, DM, DO, EE, ES, FI, GB, GD, GE, GH, GM, GN, GR, GU, HA, HB, HC, HD, HE, HF, HG, HH, HI, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				
AU 9955610	A1	20000506	AU 1999-15610	19990813
PRAI US 1998-16551P	P	19980514		
WO 1999-0318150	W	19990813		

L8 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 2000:198106 CAPLUS
DN 132:133819
TI Use of scaffold attachment region (SAR) for improved plant transformation
IN Horn, Michael E.; Hall, Gerald E., Jr.
PA Myogen Plant Science, Inc., USA
SO PCT Int. Appl., 36 pp.
CODEN: PEXXDE

DT Patent
LA English
FAM.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 1999/06757	A1	20000210	WO 1999-US7594	19990406
	W:	AE, AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, DE, GD, GE, HK, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, PO, PG, SI, SK, SL, TR, TT, UA, UZ, VN, YU, ZA, AM, AZ, BA, BG, KZ, MD, RU, TC, TM			
	FW:	CH, CL, KE, LS, MA, SD, SL, SE, SG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9934764	A1	20000221	AU 1999-34763	19990406
PRAI	US 1998-117080	A	19980731		
	WO 1999-US7594	W	19990406		

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2002 ACS
AN 2000:099146 CAPLUS
DN 133:242324
TI Coat protein genes of 3 strains of cucumber mosaic virus for the preparation of virus-resistant plants
IN Boeshare, Maiky L.; McMaster, Russell J.; Triboli, David M.; Reynolds, John F.; Darney, Kim J.
PA Seminis Vegetable Seeds, Inc., USA
SO U.S., 57 pp., Cont.-in-part of U.S. Ser. No. 367,783, abandoned.
CODEN: USXKAV
DT Patent
LA English
FAM.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6127611	A	20001003	US 1997-575233	19970929
	WO 9821014	A1	19980711	WO 1999-US7234	19990607
	W:	AK, AT, AU, BE, BG, BR, BY, CA, CN, CU, CZ, DE, DK, EE, ES, FI, GE, GF, HU, JP, KE, KG, KP, KR, KZ, LF, LR, LT, LU, LV, MD, MG, MK, MW, MX, NO, NZ, PL, PT, PO, PU, SD, SE, SI, SK, TJ, TT, UA, UZ, VE			
	FW:	FE, MG, SD, SG, SG, US, AT, BE, CH, DE, IE, ES, FR, GB, GR, IE, IT, LI, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	US 6042491	B1	20000129	US 2000-616567	20000714
PRAI	US 1994-107949	B2	19941130		
	WO 1995-US7234	W	19950607		
	US 1997-105233	A3	19970929		

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2002 ACS
AN 2001:471146 CAPLUS
DN 136:16184
TI Modification of sulfur metabolism in plants by overexpression of bacterial cysE and cysK genes
AU Blaszczyk, A.; Liszewska, P.; Brudzka, R.; Siroko, A.
CS Institute of Biochemistry and Biophysics, Polish Academy of Sciences, Warsaw, 02-106, Pol.
SO NATO Science Series, Series A: Life Sciences (2000), 319(Use of Agriculturally Important Genes in Biotechnology), 19-25
CODEN: NASAF2; ISSN: 1367-6686
PE IOS Press
DT Journal
LA English

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

12 ANSWER 12 OF 29 AGRICOLA
AN 2000:47157 AGRICOLA
DN IND22002751
TI Increased resistance to oxidative stress in transgenic tobacco plants
overexpressing bacterial serine acetyltransferase.
AU Blaszczyk, A.; Brodzik, R.; Siro, A.
CS Polish Academy of Sciences, Warsaw.
AV DNAL (DN/10.10)
SO The Plant Journal : for cell and molecular biology, Oct 1999. Vol. 20, No.
2. p. 217-219
Publisher: Oxford : Blackwell Sciences Ltd.
ISSN: 0960-741X
NTE Includes references
CY England; United Kingdom
DT Article
FS Non-U.S. Inprint (other than FAI)
LA English

16 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1999:0419 CAPLUS
DN 199:071037
TI Use of scutella attachment region (SAR) for improved plant
transformation
IN Horn, Michael E.; Hall, Gerald E., Jr.
PA Mycogen Plant Science, Inc., USA
SO PCT Int. Appl., 36 pp.
CODEN: PEXM1
DT Patent
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 93/11194	A1	19931004	WO 1998-US6109	19980327
W: AL, AO, EA, EB, EC, EF, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LB, LF, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, PR, ST, SI, SK, SL, TS, TT, UA, UZ, VN, YU, AM, AS, BY, KG, KZ, MD, RI, TJ, TN				
FW: CH, CN, KE, LS, MW, SL, SZ, UG, ZW, AT, BE, CH, DE, DE, ES, FI, EF, GE, GR, IF, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9803710	A1	19981012	AU 1998-63716	19980327
EP 970236	A1	20000112	EP 1998-914334	19980327
F: AT, BE, CH, DE, EF, EG, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9607844	A	20000222	BR 1998-7899	19980327
JP 201519782	T2	20011116	JP 1998-541834	19980327
PRAI US 1997-41813P	P	19970313		
US 1997-54413P	P	19970731		
WO 1998-US6109	W	19980327		

18 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1999:167861 CAPLUS
DN 131:110773
TI pBIN20: an improved binary vector for Agrobacterium-mediated
transformation
AU Hennegan, Kevin P.; Danna, Kathleen J.
CS Department of Molecular, Cellular, and Developmental Biology, University
of Colorado, Boulder, CO, 80309-0347, USA
SO Plant Molecular Biology Reporter (1998), 16(2), 129-131
CODEN: PMERD4; ISSN: 0735-3649
PB Kluwer Academic Publishers

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

1977. 25, 246, 4

14. Gene expression in transgenic plants

in Kellogg, Bill Anne; Bestwick, Richard Keith
LA AgriStone, Inc., USA; Kellogg, Bill Anne; Bestwick, Richard Keith.

CODEN: PIYKDE

LA English

FAN.CNT 3

PATENT NO.		KIND	DATE	APPLICATION NO.		DATE
WO 9727312	A1	19970731	WO 1997-US1443		19970127	
W:	AL, AH, AT, AU, AC, BA, BB, BC, BF, BY, CA, CH, CN, CZ, DE, DK, EE, EG, FI, GB, GL, HU, IL, IS, JP, KE, KG, KR, LC, LK, LR, LU, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TN, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BZ, EG, EZ, MI, RU, TJ, TN					
SW:	BE, LA, MW, SD, SG, UG, AT, BE, CH, DE, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BU, CF, CG, CL, CM, GA, GN, ML, HE, NE, SN, TD, TG					
US 5785393	A	19980731	US 1996-092936		19960129	
CA 2248969	AA	19970731	CA 1997-1343969		19970127	
AU 5714408	A1	19970820	AJ 1997-13466		19970127	
AD 712160	B2	19961104				
EP 877413	A1	19961118	EP 1997-304371		19970127	
F:	AT, BE, CH, DE, EE, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
JP 200-509848	T2	20000404	JP 1997-537109		19970127	
US 5824202	A	19990727	US 1998-134573		19980708	
US 1996-592936		19960129				
WO 1997-US1443		19970127				

AN 1993:75:46 LIOSIS

DN PREVIOUS 1007:396

PREV199100073396
pBECKS: A flexible series of binary vectors for Agrobacterium-mediated
plant transformation.

plant transformation.
McCormac, Alex C.; Elliott, Malcolm C.; Chen, Long-Fang (1)
QS 111 Norman Borlaug Inst. Plant Sci. Res., De Montfort Univ., Scraptoft,
Leicestershire LE12 5SU UK
1987, Vol. 2, No. 3, pp. 199-213.

50 Molecular Biotechnology, (Dec., 1997 Vol. 3, No. 3, pp. 199-213.
ISSN: 1753-6085.

DATE: 11/10/06

7A 2021.6

AN 1997:1.9:13 CAPLUS

DN 126:8:019

DN 126:81019
TI Cloning and sequence of the maize gene for 5C9 protein and its use for
insect control

IN insect control
Fox, Timothy W.; Garnaat, Carl W.; Meyer, Terry E.

PI Pioneer Hi-Bred International, Inc., USA

SO ECT Int. App'., 30 pp.

COLEN: PEXXD2

RESEARCH DESIGN

LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9637615	A1	19961128	WO 1996-US764	19960524
	W:				
	AL, AM, AT, AU, AZ, BE, BG, BR, BY, CA, CH, CN, CU, DE, DK, EE, ES, FI, GB, GE, HU, IE, JP, KE, KG, KP, KR, KZ, LA, LR, LU, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SI, SK, SS, SI				
	FW:				
	KE, LS, MW, SD, SE, US, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GM, MI				
	US 5824961	A	19981120	US 1995-440936	19950525
	CA 2321900	AA	19961128	CA 1996-2211972	19960526
	AU 9638701	A1	19961128	AU 1996-58791	19960524
	US 5-42662	A	19990116	US 1996-756355	19961126
PRAI	US 1995-449986		19950525		
	WO 1996-037764		19960524		

L8 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1996:14619 CAPLUS

EN 125:14619

TI Coat protein genes of cucumber mosaic virus for the preparation of virus-resistant plants

IN Boeshore, Maury L.; McManis, J. Russell; Tricoli, David M.; Reynolds, Jean E.; Carney, Kim J.

PA Agris Seed Company, USA

SO PCT Int. Appl., 80 pp.

COLEN: EIMXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9601011	A1	19960711	WO 1995-US7234	19950607
	W:				
	AM, AT, AU, BB, BE, BF, BY, CA, CH, CN, CU, DE, DK, EE, ES, FI, FR, GE, HU, JP, KE, KG, KP, KR, KZ, LF, LR, LT, LU, LA, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SE, SI, SK, SI, TJ, TT, UA, US, UZ				
	FW:				
	BE, MA, SD, SZ, TR, AT, BE, CH, DE, DK, ES, FR, GE, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GM, MI, MR, NE, SN, TL, TG				
	AU 6011447	A1	19960714	AU 1995-27637	19950607
	AU 706887	B2	19960714		
	EP 411734	A1	19960711	EP 1995-922996	19950607
	F:				
	BE, DE, ES, FR, GE, IT, NL				
	US 5127661	A	19960714	US 1997-676233	19970929
	US 6142605	B1	19960714	US 2000-616567	20000714
PRAI	US 1994-067789	A2	19941120		
	WO 1995-US7234	W	19950607		
	US 1997-075233	A3	19970719		

L8 ANSWER 19 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
4

AN 1996:331947 BIOSIS

EN PRFV199639054303

TI Analysis of octopine left border-directed DNA transfer from Agrobacterium to plants.

AU Ramanathan, Vai; Veluthambi, K. (1)

CS (1) Dep. Plant Biotechnol., Sch. Biotechnol., Madurai Kamaraj Univ., Madurai 625 021 India

SO Journal of Biosciences (Bangalore), (1996) Vol. 21, No. 1, pp. 45-56.
ISSN: 0250-5991.

DT Article

LA English

L8 ANSWER 20 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 5
 AN 1995:495039 BIOSIS
 DN PRV1995:495039
 TI High-level production and long-term storage of engineered antibodies in
 transgenic tobacco seeds.
 AU Fiedler, Mirko; Conrad, Udo H.
 CO 1. Inst. Pflanzen-genetik Kulturpflanzenforschung, Corrensstr. 3, D-06466
 Gatersleben, Germany
 SO Bio-Technology (New York), (1995) Vol. 13, No. 10, pp. 1090-1093.
 ISSN: 0730-222X.
 DT Article
 LA English

L8 ANSWER 21 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 6
 AN 1995:495039 BIOSIS
 DN PRV1995:495039
 TI Expression of 2S seed storage protein gene of Brassica juncea in
 transgenic tobacco plants under constitutive and seed-specific promoters.
 AU Ghosh, Rudip K.; Dasgupta, Jaydip; Maiti, Indu B.; Hunt, Arthur G.;
 Mandal, Radha K. (1)
 CO (1) Dep. Biochem., Cent. Plant Mol. Biol., Bose Inst., Calcutta 700 054
 India
 SO Journal of Plant Biochemistry and Biotechnology, (1995) Vol. 4, No. 1, pp.
 1-4.
 DT Article
 LA English

L8 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 1992:406853 CAPLUS
 DN 117:66833
 TI Modification of patterns of sugar metabolism in plants with an
 heterologous enzyme
 IN Sonnenwald, Uwe; Willmitzer, Lothar
 PA Institut fuer Genbiologische Forschung Berlin GmbH, Germany
 SO Eur. Pat. Appl., 15 pp.
 CODEN: FPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 438044	A1	19920513	EP 1991-250301	19911104
	EP 438044	A3	19920723		
	EP 438044	B1	20011013		
	E: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	DE 4136756	A1	19920514	DE 1990-4035756	19901108
	AU 9187121	A1	19920514	AU 1991-87021	19911104
	AU 658109	B2	199411208		
	EP 1114866	A2	20010701	EP 2001-106521	19911104
	EP 1114866	A3	20011126		
	E: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 200101	E	20011115	AT 1991-250301	19911104
	CA 2095150	AA	19920519	CA 1991-2055150	19911107
	HU 00704	A2	19921013	HU 1991-3508	19911107
	HU 219138	B	19981130		
	JP 85036971	A2	19880917	JP 1991-291065	19911107
	US 5492820	A	19960220	US 1993-147007	19931102
PRAI	DE 1990-4035756	A	19901108		
	EP 1991-250301	A3	19911104		
	US 1991-788921	B1	19911107		

DUPLICATE 7

L1 ANSWER 24 OF 29 AGRICOLA
 AN 93:1238 AGRICOLA
 EN 113:98:23
 TI Resistance to heterologous isolates of tomato spotted wilt virus in transgenic tobacco expressing its nucleocapsid protein gene.
 AU Pang, S.L.; Nagpala, P.; Wang, H.; Slightom, J.L.; Goncalves, L.
 AV DNAL (464.8 P56)
 SO Phytopathology, Oct 1992. Vol. 82, No. 10. p. 1223-1229
 Publisher: St. Paul, Minn. : American Phytopathological Society.
 CODEN: PHYTAJ; ISSN: 0031-944X
 NTE Includes references.
 DT Article
 FS U.S. Imports not USDA, Experiment or Extension
 LA English

L8 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 1990:4(1-25) CAPLUS
 EN 113:98:23
 TI Expression cassette for plant
 AU Slightom, Jerry L.
 FA Uajche, Ill., USA
 SO PCT Int. Appl., 39 pp.
 CODEN: PEXXD2
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9001185	A1	19900630Y	WO 1989-US3095	19890720
	W: AU, DK, FI, HU, JP, FR, NO, SU, US				
	FA: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AU 3998704	A1	19900613	AU 1989-39704	19890720
	AU 634441	B2	19900613		
	EP 420473	A1	19900613	EP 1989-908579	19890720
	EP 420473	B1	19900613		
	E: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 0410131	T2	19900613	JP 1989-50115	19890720
	AT 118996	E	19900613	AT 1989-908579	19890720
	EP 698165	A1	19900613	EP 1989-111128	19890720
	E: AU, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	EP 698165	A1	19900613	EP 1989-111129	19890720
	E: AU, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	AT 101173	E	19900613	AT 1989-908579	19890720
	CA 1000118	A1	19900613	CA 1989-908579	19890720
	CA 1308561	A1	19900613	CA 1989-908579	19890720
	CN 1044126	A	19900613	CN 1989-106449	19890819
	CN 1044127	A	19900613	CN 1989-106450	19890819
	EK 9101181	A	19900613	DK 1991-281	19910219
PRAI	US 1989-334412		19890619		
	US 1989-333536		19890619		
	US 1989-366710		19890619		
	EP 1989-908579		19890720		
	EP 1989-908758		19890720		
	WO 1989-US3095		19890720		

L8 ANSWER 25 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 AN 1990:3(18692) BIOSIS
 EN BA90:02573
 TI THE P17 PLASMIDS CASSETTES UTILIZING CAMV SEQUENCES FOR EXPRESSION OF FOREIGN GENES IN PLANTS.
 AU TIMMERMAN M C P; MALIGA P; VIEIRA J; MESSING J
 OS WAKSMAN INST., RUTGERS, STATE UNIVERSITY NEW JERSEY, PISCATAWAY, NJ
 08855-1759.

SO J BIOTECHNOL, (1990) 14 (3-4), 333-344.
 COTEN: JBIID4. ISSN: 0168-1656.
 BT BA; OLI
 LA English

L8 ANSWER 26 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 4
 AN 1989:219512 BIOSIS
 DN 1989:219512
 TI EXPRESSION OF A POTYVIRUS NON-STRUCTURAL PROTEIN IN TRANSGENIC TOBACCO.
 IN HAYESBETH D; HELLMANN J M; SHAW J G; PROADD P E; HUNT A G
 CS DEP. OF AGRONOMY, N-212, ARSN, UNIV. OF KY., LEXINGTON, KY. 40546-0001.
 SO BIOCHEM BIOPHYS RES COMMUN, (1989) 160 (2), 425-432.
 COTEN: BBRCA9. ISSN: 0006-291X.
 BT BA; OLI
 LA English

L8 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 1988:161721 CAPLUS
 DN 198:161721
 TI Transformation and foreign gene expression with woody species
 IN Fillard, Joanne; Comai, Luca
 PA Calgene, Inc., USA
 SO Eur. Pat. Appl., 9 pp.
 COTEN: EPKMDW
 BT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
E1	EP 228164	A1	19870701	EP 1986-308131	19861030
	EP 228164	A1	19890610		
				BE, AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE	
	US 4731311	A	19890103	US 1986-832928	19860224
	FI 8604307	A	19870515	FI 1986-4331	19861024
	AU 1988101	A1	19870501	AU 1986-65122	19861113
	AU 58191	B2	19900614		
PRAI	US 1981-708050		19851114		
	US 1986-832928		19860224		

L8 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AN 1987:150712 CAPLUS
 DN 106:150712
 TI Comparison of cauliflower mosaic virus 35S and neopline synthase promoters in transgenic plants
 AU Sanders, P. R.; Winter, J. A.; Barnason, A. R.; Rogers, S. G.; Fraley, R. T.
 CS Plant Mol. Biol. Group, Monsanto Co., St. Louis, MO, 63176, USA
 SO Nucleic Acids Res. (1987), 15(4), 1543-59
 COTEN: NARFAD; ISSN: 0305-1048
 BT Journal
 LA English

L8 ANSWER 29 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 10
 AN 1987:461095 BIOSIS
 DN 1987:461095
 TI FACTORS AFFECTING THE LEVEL OF KANAMYCIN RESISTANCE IN TRANSFORMED SUNFLOWER CELLS.
 AU NUTTER P; EVERETT N; PIERCE D; PANGANIBAN L; OKUBARA P; LACHMANSINGH R; MASCARENNAS D; WELCH H; METTLER I; ET AL
 CS DEP. AGRIC. BIOTECHNOL., STAUFFER CHEM. CO., RICHMOND, CALIF. 94804.
 SO PLANT PHYSIOL (BETHESDA), (1987) 84 (4), 1185-1192.
 COTEN: PLPHAY. ISSN: 0032-0889.

SA: ALL
LA: English

=> s plant(w)expression(w)cassette and transform? and pinus
L9 0 PLANT(W) EXPRESSION(W) CASSETTE AND TRANSFORM? AND PINUS

=> s plant(w)expression(w)cassette and transform? and populus
L10 0 PLANT(W) EXPRESSION(W) CASSETTE AND TRANSFORM? AND POPULUS

=> s plant(w)transform? and camv and nos and pbin and npt and binary(w)vector
L11 0 PLANT(W) TRANSFORM? AND CAMV AND NOS AND PBIN AND NPT AND BINARY
W) VECTOR

	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	96.26	137.48

FILE 'AGRICOLA' ENTERED AT 13:23:53 ON 21 JUN 2002

FILE 'BIOSIS' ENTERED AT 13:23:53 ON 21 JUN 2002
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=> s plant(w)transform? and camv and nos and pbin and npt and binary(w)vector
L12 0 PLANT(W) TRANSFORM? AND CAMV AND NOS AND PBIN AND NPT AND BINARY
(W) VECTOR

=> s plant(w)transform? and camv and nos and pbin and phosphotransferase
L13 0 PLANT(W) TRANSFORM? AND CAMV AND NOS AND PBIN AND PHOSPHOTRANSFERASE

=> s plant(w)transform? and camv and nos and phosphotransferase
L14 3 PLANT(W) TRANSFORM? AND CAMV AND NOS AND PHOSPHOTRANSFERASE

=> d 114 1-3

114 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:41036 BIOSIS
DN PREV200100041036
TI Direct transformation and plant regeneration of the haploid liverwort
Marchantia polymorpha L.
AU Takenaka, Mizuki; Yamacka, Shohei; Hanajiri, Tsutomu; Shimizu-Ueda, Yuu;
Yamato, Katsuyuki T.; Fukuzawa, Hideya; Ooyama, Kanji (1)
CS (1) Laboratory of Plant Molecular Biology, Division of Integrated Life
Science, Graduate School of Biostudies, Kyoto University, Kyoto, 606-8502;
kohyama@lif.kyoto-u.ac.jp Japan
SO Transgenic Research, (June, 2000) Vol. 9, No. 3, pp. 179-185. print.
ISSN: 0962-8819.
DI Article
LA English
LI English

114 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 2001:544133 CAPLUS
DN 133:176433

TI Production of recombinant rotavirus structural proteins by transformed
 plant cell, and edible vaccine composition including the rotavirus antigen
 IN Kim, Won-yong; Chana, In-sik; Lee, Youn-hyung; Kim, Hong-joong
 SA S. Korea
 SO PCT Int. Appl., 55 pp.
 CMEN: PHXZD2
 DT Patent
 LA English
 RE.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001/03110	A1	20010816	WO 2001-KR200	20010217
RI: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CS, CU, CZ, DE, DF, DM, DZ, EE, ES, FI, GB, GD, GE, GR, GM, HP, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, ME, MG, MF, MN, MW, MX, NC, NG, NL, PL, PT, RO, RU, SD, SE, SG, SI PW: GH, GM, HE, LS, MW, ME, SD, SL, SS, TT, UG, ZW, AT, BF, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, EJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI KR 2000-6094	A	20000212		
RE.CNT 6	THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L14 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:728937 CAPLUS
 DN 134:261674
 TI Direct transformation and plant regeneration of the haploid liverwort
 Marchantia polymorpha L.
 AU Takenaka, Mizuki; Yamacka, Shohei; Hanajiri, Tsutomu; Shimizu-Ueda, Yuu;
 Yamato, Fatsuyuki T.; Fukuzawa, Hideya; Iiyama, Kanji
 CS Laboratory of Plant Molecular Biology, Division of Integrated Life
 Science, Graduate School of Biostudies, Kyoto University, Kyoto, 606-8502,
 Japan
 SO Transgenic Research (2000), 9(3), 179-185
 CODEN: TRSEBS; ISSN: 0962-8819
 FB Kluwer Academic Publishers
 DT Journal
 LA English
 RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s agrobacterium and camv and nos and reomycin
 L15 : AGRBACTERIUM AND CAMV AND NOS AND NEOMYCIN

=> d 115 1-8

L15 ANSWER 1 OF 1 AGRICOLA
 AN 1999:060174 AGRICOLA
 DN 1999:2000016
 TI Integration, expression and inheritance of two linked T-DNA marker genes
 in transgenic lettuce.
 AU McCabe, M.S.; Mahapatra, U.R.; Debnath, S.C.; Power, J.B.; Davey, M.R.
 CS University of Nottingham, University Park, Nottingham, UK.
 AV DNAL (QF981.4.M63)
 SO Molecular breeding : new strategies in plant improvement, 1999. Vol. 5,
 No. 4. p. 329-344
 Publisher: Dordrecht ; Boston : Kluwer Academic Publishers, c1995-
 CODEN: MOBRFL; ISSN: 1380-3743
 NTE Includes references
 CY Netherlands
 DT Article
 FS Non-U.S. Imprint other than FAO

LA English

L11 ANSWER 2 OF 8 AGRICOLA
AN 94:76899 AGRICOLA
DN IND20413693
TI Genetic transformation and plant regeneration of watermelon using
Agrobacterium tumefaciens.
AU Choi, P.S.; Soh, W.Y.; Kim, Y.S.; Yoo, O.J.; Liu, J.P.
AV DNAL (QK725.P54)
SO Plant cell reports, 1994. Vol. 13, No. 6, p. 344-348. 1
Publisher: Berlin, W. Ger. : Springer International.
CODEN: PCRPD3; ISSN: 0721-7714
NTE Includes references
CY Germany
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L15 ANSWER 3 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:254973 BIOSIS
DN PREV19491262973
TI Genetic transformation and plant regeneration of watermelon using
Agrobacterium tumefaciens.
AU Choi, P.S.; Soh, W.Y.; Kim, Y.S.; Yoo, O.J.; Liu, J.P.
CS (1) Plant Cell Biol. Lab., Genetic Eng. Res. Inst., KIST, Taejeon Korea
SO Plant Cell Reports, (1994) Vol. 13, No. 6, pp. 344-348.
ISSN: 0721-7714.
DT Article
LA English

L15 ANSWER 4 OF 8 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:149814 BIOSIS
DN PREV19949173814
TI Genetic transformation by **Agrobacterium tumefaciens** in the
interspecific hybrid *Helianthus annuus* X *Helianthus tuberosus*.
AU Pugliesi, Claudio; Biasini, Maria Grazia; Fambrini, Marco; Baroncelli,
Sergio (1
CS (1) Dep. Agricultural Plant Biology, Genetics Section, Via Matteotti 1/B,
I-56100 Pisa Italy
SO Plant Science (Limerick), (1993) Vol. 93, No. 1-2, pp. 105-115.
ISSN: 0168-9452.
DT Article
LA English

L15 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2002 AOS
AN 2001:598135 CAPLUS
DN 135:176438
TI Production of recombinant rotavirus structural proteins by transformed
plant cell, and edible vaccine composition including the rotavirus antigen
IN Kim, Won-yong; Chung, In-sik; Lee, Youn-hyung; Kim, Hong-joong
PA S. Korea
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001033070	A1	20010916	WO 2001-KR296	20010212
N: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
DE, DK, EE, ES, FI, GB, GR, HU, IE, IL, IN, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU,				
LV, MA, MD, ME, MK, MN, MU, MX, MY, NZ, PA, PE, PG, PH, PL, PT, RO, RU, SD,				
SE, SG, SI				

RW: GH, GM, KE, LS, MN, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

IRAI: KP 2000-0694 A 20000212
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1999:718118 CAPLUS
DN 122:22259
TI Genetically modified organisms in food-screening and specific detection by
polymerase chain reaction
AU Vollenhofer, Sabine; Burg, Kornel; Schmidt, Josef; Kroath, Hans
CS Austrian Research Centers Seibersdorf Biotechnology Unit, Seibersdorf,
A-2444, Austria
SO Journal of Agricultural and Food Chemistry (1999), 47(12), 5638-5643
CODEN: JAFDAG; ISSN: 0021-3561
PE American Chemical Society
DT Journal
LA English
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1995:13918 CAPLUS
DN 122:73240
TI Genetic transformation and plant regeneration of watermelon using
Agrobacterium tumefaciens
AU Choi, Pil S.; Sch, Wang Y.; Kim, Youn S.; Yoo, Cok J.; Liu, Jang R.
CS Genet. Eng. Res. Inst., FIST, Taejeon, S. Korea
SO Plant Cell Rep. (1994), 13(5), 344-3
CODEN: PLRBDI; ISSN: 0721-7714
DT Journal
LA English

L15 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2002 ACS
AN 1994:237118 CAPLUS
DN 120:237118-
TI Genetic transformation by **Agrobacterium tumefaciens** in the
interspecific hybrid *Helianthus annuus* .times. *Helianthus tuberosus*
AU Eugliesi, Claudio; Biasini, Maria Grazia; Fambrini, Marco; Baroncelli,
Sergio
CS Genet. Sect., Dep. Agric. Plant Biol., Pisa, I-56124, Italy
SO Plant Sci. (Limerick, Irel.) (1995), 93(1-2), 105-15
CODEN: PLSCDE; ISSN: 0163-9452
DT Journal
LA English

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COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
53.88	191.36

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=> file agricola biosis embase caplus
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SINCE FILE	TOTAL
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ENTRY SESSION
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=> s poin19 and agrobacterium and camv and nptII
L16 3 PRIN19 AND AGROBACTERIUM AND CAMV AND NPTII

=> d L16 1-3

L16 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN 2002:452631 CAPLUS

TI Transformation of Gerbera plants with tomato spotted wilt virus (TSWV)
nucleoprotein gene

AU Kerbin, M.; Podwyszynska, M.; Komarowska, B.; Wawrzyniak, D.

CS Research Institute of Entomology and Floriculture, Skierniewice, 96-100,
Pol.

SO Acta Horticulturae (2002), 572(Proceedings of the Twentieth International
Eucarpia Symposium, Section Ornamentals, 2001), 149-157
CODEN: AHORAL; ISSN: 0567-7572

PB International Society for Horticultural Science

DT Journal

LA English

L16 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN 1999:015163 CAPLUS

DN 131:143146

TI Chitinase-transgenic lines of "Royal Gala" apple showing enhanced
resistance to apple scab

AU Wong, K-W.; Harman, G. E.; Norelli, J. L.; Gustafson, H. L.; Aldwinckle,
H. S.

CS Department of Plant Pathology, Cornell University, Geneva, NY, 1446, USA

SO Acta Horticulturae (1998), 434(Eucarpia Symposium on Fruit Breeding and
Genetics, 1996), 595-597

CODEN: AHORAL; ISSN: 0567-7572

PB International Society for Horticultural Science

DT Journal

LA English

RE.CNT 20 THERE ARE 20 CITEI REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE FE FORMAT

L16 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN 1998:373878 CAPLUS

DN 129:145382

TI Preparation of coat protein-containing binary vectors for use in
agrobacterium-mediated transformation

AU Wallis, Corrin V.; Boulton, Margaret L.

CS Department of Virus Research, John Innes Centre, Norwich, UK

SO Methods in Molecular Biology (Totowa, New Jersey) (1998), 81(Plant
Virology Protocols), 341-352

CODEN: MEMBID; ISSN: 1064-3743

PB Humana Press Inc.

DT Journal

LA English

=> FILE STNGUIDE
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
12.78	204.29

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=> file agricola biosis embase caplus
COST IN U.S. DOLLARS
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
0.12	204.32

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=> d 112 1-1

L12 HAS NO ANSWERS

'1-2' IS NOT A VALID SEARCH STATUS KEYWORD
Search status keywords:

NONE ---- Display only the number of postings.

STATUS -- Display statistics of the search.

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'1:dnone' IS NOT A VALID SEARCH STATUS KEYWORD

Search status keywords:

NONE ---- Display only the number of postings.

STATUS -- Display statistics of the search.

ENTER SEARCH STATUS OPTION (NONE), STATUS, OR 1:y

'1' IS NOT A VALID SEARCH STATUS KEYWORD

Search status keywords:

NONE ---- Display only the number of postings.

STATUS -- Display statistics of the search.

ENTER SEARCH STATUS OPTION (NONE), STATUS, OR 1:status

L12 2 SHA PLANT(W) TRANSFORM? AND CAMV AND NOS AND PBIN AND NPT AND
BINARY(W) VECTOR

=> d 116 1

L16 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN 2002:452631 CAPLUS

TI Transformation of Gerbera plants with tomato spotted wilt virus (TSWV)
nucleoprotein gene

AU Korbin, M.; Podwyszynska, M.; Komarowska, B.; Wawrzyniczak, D.

CS Research Institute of Pomology and Floriculture, Skierniewice, 96-100,
Pol.

AB Asia Horticulturae 2372, 472/Proceedings of the Twentieth International
 Horticultural Congress, Section Ornamentals, 2001, 143-157
 ISSN: ARDAA2; ISSN: 0967-1372
 PB International Society for Horticultural Science
 DT Journal
 LA English

-> FILE STINGUIDE		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
	3.97	208.29
FULL ESTIMATED COST		

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 LAST RELEASED: Jun 14, 2002 (20120614/CP).

-> file agricola biosis embase caplus		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
	0.12	208.47
FULL ESTIMATED COST		

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=> s pbin19
 L17 23 PBIN19

=> s 117 and npt11
 L18 21 L17 AND NPT11

=> s 117 and neomycin
 L19 25 L17 AND NEOMYCIN

=> s 119 and camv
 L20 1 L19 AND CAMV

=> s 119 and 35s
 L21 1 L19 AND 35S

> d 121

L21 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
 AN 1993:95261 CAPLUS
 ON 1993:95261
 TI Factors influencing Agrobacterium tumefaciens mediated transformation and
 expression of kanamycin resistance in pickling cucumber
 AU Sakamoto, G. G.; Alpert, K.; Tang, F. A.; Punja, Z. K.
 CS Campbell Inst. Res. Technol., Campbell Soup Co., Davis, CA, 95616, USA
 JO Plant Cell, Tissue Organ Cult. 1992; 31(3), 185-93

CODEN: PTCEDJ; ISSN: 0167-6857
BT Journal
LA English

FILE STINGUIDE
COST IN U.S. DOLLARS
FILE ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
11.71	220.12

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LAST RELEASED: Jun 14, 2002 (70/20614/UP).

=> d 119 1-11
YOU HAVE REQUESTED DATA FROM FILE 'AGRICOLA, BIOSIS, EMBASE, CAPLUS' - CONTINUE?
(Y/N):y

L19 ANSWER 1 OF 22 AGRICOLA
AN 2000:34195 AGRICOLA
DN IND200034164
TI A novel binary vector series for plant transformation.
AU Xiang, C.; Hsu, P.; Lutziger, L.; Wang, K.; Oliver, D.J.
CS Iowa State University, Ames, IA.
AV DNA 1.8K10.P800
SD Plant Molecular Biology, July 1999. Vol. 40, No. 4. p. 711-717
Publisher: Dordrecht : Flower Academic Publishers.
CODEN: ENBIB2; ISSN: 0167-4412

NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L19 ANSWER 2 OF 22 AGRICOLA
AN 1998:25710 AGRICOLA
DN IND2003703264
TI Agrobacterium-mediated transformation of Artemisia absinthium L.
(wormwood) and production of secondary metabolites.
AU Nin, S.; Benrici, A.; Roselli, G.; Mariotti, D.; Schiff, S.; Magherini, R.
SD Plant cell reports, July 1997. Vol. 16, No. 10. p. 725-730
Publisher: Berlin, W. Ger. : Springer International.
CODEN: ICRED8; ISSN: 0721-7714

NTE Includes references
CY Germany
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L19 ANSWER 3 OF 22 AGRICOLA
AN 96:2046 AGRICOLA
DN IND20491089
TI pPINPLUS: an improved plant transformation vector based on pBIN19
AU Engelen, F.A. van; Molthoff, U.W.; Conner, A.J.; Nap, J.P.; Pereira, A.;
Stiekema, W.J.
CS CPRO-DLO, Wageningen, The Netherlands.
AV DNA 1.2K442.6.T74

J1 Transgenic research, July 1991. Vol. 4, No. 4. p. 288-296.
 Publisher: London, UK : Chapman & Hall, 1991-
 CODEN: TRSREP; ISSN: 0962-1067
 NTE Includes references
 CY England; United Kingdom
 DT Article
 FS Non-U.S. Imprint other than FAO
 LA English

L19 ANSWER 4 OF 22 AGRICOLA
 AN 95:61913 AGRICOLA
 DN IND2048:785
 TI Biolistic transformation of chrysanthemum with the nucleocapsid gene of
 tomato spotted wilt virus.
 AU Yapas, J.M.; Mittak, V.; Pang, S.Z.; Gonsalves, C.; Slightom, J.L.;
 Gonsalves, D.
 CS Cornell University, Geneva, NY.
 AV DNAL QK775.P54)
 SO Plant cell reports, 1995. Vol. 14, No. 11. p. 694-698
 Publisher: Berlin, W. Ger. : Springer International.
 CODEN: PCRPD8; ISSN: 0721-7714
 NTE Includes references
 CY Germany
 DT Article
 FS Non-U.S. Imprint other than FAO
 LA English

L19 ANSWER 5 OF 22 AGRICOLA
 AN 93:27362 AGRICOLA
 DN IND93:13741
 TI Modified binary plant transformation vectors with the wild-type gene
 encoding NPTII.
 AU Datla, R.S.S.; Hammerlinal, J.K.; Panchuk, B.; Pelcher, L.E.; Keller, W.
 CS National Research Council of Canada, Saskatoon, Sask., Canada
 AV DNAL QH442.A134)
 SO Gene, 1992. Vol. 122, No. 2. p. 381-384
 Publisher: Amsterdam : Elsevier Science Publishers.
 CODEN: GENSD6; ISSN: 0378-1119
 NTE Includes references.
 DT Article
 FS Non-U.S. Imprint other than FAO
 LA English

L19 ANSWER 6 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1997:3:2104 BIOSIS
 DN PFEV19:799691307
 TI Agrobacterium-mediated transformation of Artemisia absinthium L.
 (wormwood) and production of secondary metabolites.
 AU Nin, S. (1); Bennici, A.; Roselli, G.; Mariotti, D.; Schiff, S.;
 Magherani, F.
 CS 1. Dip. Ortoflorofrutticoltura, Univ. Firenze, Via Donizetti 6, I-50144
 Firenze- Italy
 SO Plant Cell Reports, (1997) Vol. 16, No. 10, pp. 725-730.
 ISSN: 721-7714.
 DT Article
 LA English

L19 ANSWER 7 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1996:123512 BIOSIS
 DN PFEV1996:26695677
 TI Ti plasmid-mediated transformation of tobacco with C-4-PEPCase cDNA from
 Isc rays.
 AU Deng Long-Ying, Long Jun; Wang Zhao-Wing; Shi Jiao-Hai
 CS Shanghai Inst. Plant Physiology, Chinese Academy Sciences, Shanghai 200032

China
 SO Acta Phytophysiological Sinica, (1995) Vol. 21, No. 3, pp. 281-288.
 ISSN: 0137-4829.
 DT Article
 LA Chinese
 SL Chinese; English

L19 ANSWER 8 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:46342 BIOSIS
 DN PREV199546342
 TI Biolistic transformation of chrysanthemum with the nucleocapsid gene of tobacco etch virus.
 AU Yebes, Luz Marcela (1); Mittak, Veronica; Pang, Shen-Zhi; Gonsalves, Carol; Sligham, Jerry L.; Gonsalves, Dennis
 CS (1) Dep. Plant Pathol., Cornell Univ., New York State Agric. Exp. Stn., Geneva, NY 14456 USA
 SO Plant Cell Reports, (1995) Vol. 14, No. 11, pp. 694-698.
 ISSN: 0721-7714.
 DT Article
 LA English

L19 ANSWER 9 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1994:17857 BIOSIS
 DN PREV199417857
 TI Screening of transgenic plants using polymerase chain reaction.
 AU Bogdanov, L.; Shul'ga, O. A.; Skryabin, K. B.
 CS Cent. "Bioeng.", Acad. Sci. Russ., Moscow 11/984 Russia
 SO Molekulyarnaya Biologiya (Moscow), (1993) Vol. 27, No. 4, pp. 947-951.
 ISSN: 0026-8984.
 DT Article
 LA Russian
 SL Russian; English

L19 ANSWER 10 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1993:144693 BIOSIS
 DN PREV1993144693
 TI Modified binary plant transformation vectors with the wild-type gene encoding NPTII.
 AU Patla, Fajun S. S. (1); Hammerlindl, Joe K.; Panchuk, Barry; Pelcher, Lawrence E.; Keller, Wilf
 CS (1) Plant Biotechnol. Inst., 110 Gymnasium Road, Saskatoon, Sask. S7N 0W9 Canada
 SO Gene (Amsterdam), (1992) Vol. 122, No. 2, pp. 383-384.
 ISSN: 0378-1119.
 DT Article
 LA English

=> d 118 1-10 ab

YOU HAVE REQUESTED DATA FROM FILE 'AGRICOLA, BIOSIS, EMBASE, CAPLUS' - CONTINUE?
 (Y/N):y

L19 ANSWER 1 OF 22 AGRICOLA
 AB A streamlined mini binary vector was constructed that is less than 1/2 the size of the **pBIN19** backbone (3.5 kb). This was accomplished by eliminating over 5 kb of non-T-DNA sequences from the **pBIN19** vector. The vector still retains all the essential elements required for a binary vector. These include a RK2 replication origin, the *nptIII* gene conferring kanamycin resistance in bacteria, both the right and left T-DNA borders, and a multiple cloning site (MCS) in between the T-DNA borders to facilitate cloning. Due to the reduced size, more unique restriction sites are available in the MCS, thus allowing more versatile cloning. Since the

that region was not included, it is not possible to mobilize this binary vector into *Agrobacterium* by triparental mating. This problem can be easily resolved by direct transformation. The mini binary vector has been demonstrated to successfully transform *Arabidopsis* plants. Based on this mini binary vector, a series of binary vectors were constructed for plant transformation.

L19 ANSWER 3 OF 12 AGRICOLA

AB Hairy roots were obtained after infection of *Artemisia absinthium* shoots with *Agrobacterium rhizogenes* strains 1855 and LBA 9402. The susceptibility to hairy root transformation varied between plant genotypes and bacterial strains. Hairy roots showed macroscopic differences from control root cultures. Southern blot hybridization confirmed the integration of T-DNA from both p1855 and **pBin19**, while polymerase chain reaction analysis indicated the presence of the **neomycin phosphotransferase** gene in the hairy root genome. Succultured transformed root lines grew well in selective B5 agar-solidified medium containing kanamycin or rifampicin and without hormones. Shake-flask experiments with fast-growing root lines showed that 40 g l⁻¹ was the best sucrose concentration for biomass production, yielding a 400-fold increase in dry weight after 23 days of culture. Great differences were found in the profiles of the essential oils isolated from normal and hairy roots. Gas chromatography/mass spectrometry analysis showed the oil produced by transformed cultures to be a mixture of 50 compounds with only one major component representing 12% of the oil content.

L19 ANSWER 3 OF 12 AGRICOLA

L19 ANSWER 4 OF 12 AGRICOLA

AB In vitro regeneration and ricistic transformation procedures were developed for several commercial chrysanthemum (*Chrysanthemum grandiflora* Tzevelov, syn. *Chrysanthemum morifolium* Ramat. cultivars using leaf and stem explants. Studies on the effect of several growth regulators and kanamycin on chrysanthemum regeneration were conducted, and a step-wise procedure to optimize kanamycin selection and recovery of transgenic plants was developed. A population of putative transformed chrysanthemum plants cvs. Blush, Dark Bronze Charm, Edison, and Tana, was obtained after bombardment with tungsten microprojectiles coated with the binary plasmid **pBIN19** containing the nucleocapsid (N) gene of tobacco etch virus (TEV) and the marker gene **neomycin phosphotransferase** (NPT II). PCR analysis of 12 putative transgenic plants selected on kanamycin indicated that the majority of the lines (83%) were transformed and contained both genes (21%). However, some transgenic lines contained only one of the genes either the NPT II (16%) or the TEV (N) gene (14%). Southern blot analysis on selected transgenic lines confirmed the integration of the TEV (N) gene into the chrysanthemum genome. These results demonstrate the development of an efficient procedure to transfer genetic material into the chrysanthemum genome and selectively regenerate transgenic chrysanthemum plants at frequencies higher than previously reported.

L19 ANSWER 5 OF 12 AGRICOLA

AB The defective gene encoding **neomycin phosphotransferase** (NPTII) present in the binary plasmid vector, **pBin19**, was replaced with the wild-type (wt) gene. Plasmid vectors analogous to **pBin19**, **pBI121** and **pBI101** were constructed carrying the gene encoding the wt NPTII enzyme activity.

L19 ANSWER 6 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Hairy roots were obtained after infection of *Artemisia absinthium* shoots with *Agrobacterium rhizogenes* strains 1855 and LBA 9402. The susceptibility to hairy root transformation varied between plant genotypes and bacterial strains. Hairy roots showed macroscopic differences from

control root cultures. Southern blot hybridization confirmed the integration of T-DNA from both p1855 and **pBin19**, while polymerase chain reaction analysis indicated the presence of the **neomycin phosphotransferase** gene in the hairy root genome. Subcultured transformed root lines grew well in selective B5 agar-solidified medium containing kanamycin or rifampicin and without hormones. Scale-flask experiments with fast-growing root lines showed that 40 μ M GA was the best GA concentration for biomass production, yielding a 4-fold increase in dry weight after 35 days of culture. Great differences were found in the profile of the essential oils isolated from normal and hairy roots. GC-mass chromatograph and spectrometry analysis showed the oil produced by transformed cultures to be a mixture of 50 compounds with only one major component representing 2% of the oil content.

- L19 ANSWER 7 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AB Phosphoenolpyruvate carboxylase (EC 4.1.1.31) is a key enzyme in C-4-dicarboxylic assimilation, and imposes a wealth of advantage to the photosynthetic properties of C-4 plants. The genetic transfer of C-4-photosynthetic system, especially PEPCase, into C-3 plant became a potential approach to improve the photosynthetic rate of C-3 plants. In this paper, a C-4-PEPCase cDNA from Zea mays was transferred into a C-3 plant tobacco, and a transgenic plant was constructed for further studies on the expression of C-4-PEPCase gene in C-3 plant as well as the modification of photosynthetic system in C-3 plants. A 2.1 kb fragment of C-4-PEPCase cDNA derived from a maize PEPCase cDNA clone pPEP3085 was subcloned into binary vector **pBin19**, and transjugated into *Agrobacterium tumefaciens* retaining vir helper plasmid *ImA4404* by means of 'triparental mating'. Then the engineering plasmid pPEP2 harbouring C-4-PEPCase cDNA was transformed into the leaf disc of tobacco by co-culture with transformed *A. tumefaciens*. Antibiotic screening yielded a batch of transformants resistant to kanamycin and the regenerated transgenic tobacco was obtained as shown. The assay for **neomycin phosphotransferase II (NPT II)** showed a frequency of 83%, implying that the C-4-PEPCase cDNA neighbouring the NPT II gene might have been transferred into tobacco cell. Southern blotting analysis provided further evidence that the PEPCase cDNA was stably integrated into the tobacco genome, promising the possibility of getting substantial expression of C-4-PEPCase gene in C-3 plants.

- L19 ANSWER 8 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AB In vitro regeneration and biolistic transformation procedures were developed for several commercial chrysanthemum *Chrysanthemum grandiflora* Cavendish, syn. *Chrysanthemum morifolium* Ramet, cultivars using leaf and stem explants. Studies in the effect of several growth regulators and kanamycin on chrysanthemum regeneration were conducted, and a step-wise procedure to optimize kanamycin selection and recovery of transgenic plants was developed. A population of putative transformed chrysanthemum plants cvs. Blush, Dark Bronze Charm, Indian, and Tara, was obtained after bombardment with tungsten microprojectiles coated with the binary plasmid **pBIN19** containing the neomycin resistance (N) gene of tomato spotted wilt virus (TSWV) and the marker gene **neomycin phosphotransferase II (NPT II)**. PCR analysis of putative transgenic plants selected on kanamycin indicated that the majority of the lines (89%) were transformed and contained both genes. However, some transgenic lines contained only one of the genes: either the NPT II (15%) or the TSWV (16%) gene. Southern blot analysis of selected transgenic lines confirmed the integration of the TSWV-N gene into the chrysanthemum genome. These results demonstrate the development of an efficient procedure to transfer genetic material into the chrysanthemum genome and selectively regenerate transgenic chrysanthemum plants at frequencies higher than previously reported.

- L19 ANSWER 9 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB A test system for selecting transgenic plants based on polymerase chain reaction (PCR), has been proposed. It is applicable to primary screening of transgenic plants obtained by cocultivation with *Agrobacterium* which contains any vector carrying **neomycin** phosphotransferase genes from transposon Tn5 and *Streptococcus* (for example **pBIN19**). These genes confer kanamycin resistance in plants and bacteria respectively. The absence of strong homology between these two genes allows one to perform two PCRs in the same reaction mixture. Thus simultaneous selection of transgenic plants and test for contamination with *Agrobacterium* are possible. We have also proposed a simple procedure for preparing small samples of plant DNA suitable for PCR detection.

L19 ANSWER 19 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB The defective gene encoding **neomycin** phosphotransferase (NPTII) present in the binary plasmid vector, **pBin19**, was replaced with the wild-type (wt) gene. Plasmid vectors analogous to **pBin19**, **pBI121** and **pBI101** were constructed carrying the gene encoding the wt NPTII enzyme activity.

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L21 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS

AB Cucumber (*Cucumis sativus* L.) petiole and leaf segments of two pickling genotypes were transformed with *A. tumefaciens* strain IBA 4404, an octopine Ti-plasmid deletion mutant that is avirulent (disarmed plasmid), but to which were added T-DNA inserts on binary plasmids (**pBIN 19**, ca. 10 kb, and **pBIN 743**, ca. 21 kb). Expression of **neomycin** phosphotransferase (NPT II) encoding resistance to the aminoglycoside kanamycin was used as a selectable marker. Factors which influenced the frequency of callus development in medium contg. kanamycin (75 mg l⁻¹) were explant size, bacterial concn. and length of exposure, cocultivation period, and presence of acetosyringone. The optimal procedure involved exposing segments of petiole (4-6 mm) or leaf (0.5 cm²) segments to a bacterial suspension (10⁸ cells mL⁻¹) contg. 10 .mu.M acetosyringone for 5 min, followed by a 48 h cocultivation period on a tobacco feeder layer. Explants were placed on M3 medium contg. 100 mg l⁻¹ carbenicillin, 75 mg l⁻¹ kanamycin, and NAA/BA (5.0/2.5 .mu.M) or 2,4-D/BA (5.0/5.0 .mu.M) and subcultured twice, each after a 2-3 wk period, onto fresh media. The overall frequency of transformed callus was 20-50%; the frequency of plantlet regeneration from transformed callus was 3-15%. Twenty-one out of 23 individual plants recovered from two genotypes of pickling cucumber were NPT II pos. (transformation frequency of 9%). Copy no. of the NPT II

gene insert (35S-NPT II-3' fragment, ca. 2.2 kb) in 3 transformed plants was estd. at 10 per haploid genome, indicative of multiple insertions within the cucumber genome. Multimers of the gene (visible as 4.4 and 6.6 kb fragments in Southern anal.) were detected in one plant, suggestive of tandem duplications or repeats. Progeny from a cross between this transformed plant and a nontransformed control showed segregation for the NPT II gene in dot-blot assays; at least 24 plants out of 32 were kanamycin pos. Copy no. in the progeny was variable, and ranged 2-10.

121

121 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS

AN 1993:95261 CAPLUS

DN 119:95261

TI Factors influencing Agrobacterium tumefaciens mediated transformation and expression of kanamycin resistance in pickling cucumber

AU Sarmiento, G. G.; Alpert, K.; Tang, F. A.; Punja, Z. K.

CS Campbell Inst. Res. Technol., Campbell Soup Co., Davis, CA, 95616, USA

SO Plant Cell, Tissue Organ Cult. (1992), 31(3), 185-93

COMEN: PICEOT; ISSN: 0167-6367

BT Journal

LA English

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119 ANSWER 11 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Two Ti binary vectors in Agrobacterium tumefaciens have been used to produce viable transgenic strawberry plants. Fertile strawberry plants with a normal phenotype were regenerated after transformation with pBIN6, which carries genes for neomycin synthase (nos) and neomycin phosphotransferase (nptII) (conferring kanamycin resistance). The transfer and expression of the two genes was confirmed by Southern blot analysis, the detection of neomycin synthase (NOS) activity in vegetative and reproductive tissues and rooting in vitro in the presence of kanamycin. The nos gene continued to be expressed in glasshouse-grown plants many months after removal from in vitro growth conditions. After selfing the R0 plants nos segregated in the R1 progeny according to a 3:1 Mendelian ratio. In in vitro germinated seedlings there was complete correlation between the presence of neomycin synthase activity and the ability of leaf segments to produce callus on a medium containing kanamycin. Transgenic

shoots that exhibited an abnormal phenotype associated with cytokinin overproduction were produced when plants were transformed with pSC1, a derivative of **pBIN19** carrying both the nptII gene and the ipt gene (encoding the enzyme isopentenyltransferase). Shoots of these plants grew on hormone-free medium, could not be induced to root and their growth was unaffected by the presence of 50 µm.g/ml kanamycin in hormone-free media.

L19 ANSWER 13 OF 22 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

AB A test system for selecting transgenic plants based on polymerase chain reaction (PCR) has been proposed. It is applicable to primary screening of transgenic plants obtained by co-cultivation with *Agrobacterium* which contains any vector carrying **neomycin phosphotransferase** genes from transposon *Tn5* and *Streptococcus* (for example **pBIN19**). These genes confer kanamycin resistance in plants and bacteria respectively. The absence of strong homology between these two genes allows one to perform two PCRs in the same reaction mixture. Thus simultaneous selection of transgenic plants and test for contamination with *Agrobacterium* are possible. We have also proposed a simple procedure for preparing small samples of plant DNA suitable for PCR detection.

L19 ANSWER 14 OF 22 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

AB The *nptII* gene encoding **neomycin phosphotransferase** (NPTII) present in the binary plasmid vector, **pBin19**, was replaced with the wild-type *wt* gene. Plasmid vectors analogous to **pBin19**, **pBIN21** and **pBIN01** were constructed carrying the gene encoding the *wt* NPTII enzyme activity.

L19 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB *Agrobacterium tumefaciens* and biolistic transformation procedures were developed for *Polaris* and *Golden Polaris*, two important com. chrysanthemum *Dendranthema grandiflora* Tavelay (syn. *Chrysanthemum morifolium* Ramat.) cultivars. The disarmed *A. tumefaciens* strains LBA1404, C58s2707 and EHA105 contg. the binary plasmids **pBIN19** or **pGA4100** were used for transformation. Both plasmids contained within the T-DNA borders of the nucleocapsid (N) protein genes of either tomato spotted wilt (TSWV), Impatiens necrotic spot (INSV), or groundnut ring spot (GRSV) tobamoviruses, and the marker gene **neomycin phosphotransferase** (NPT II); **pGA4100** contained also the *uidA* gene. Transgenic plants were recovered using leaf and stem explants, and using a step-wise kanamycin selection procedure to optimize recovery of transformed plants. PCR and Southern blot analyses confirmed the integration of the N genes into the chrysanthemum genome. Most of the putative transgenic plants tested gave PCR pos. (9/9) indicating that the kanamycin selection procedure was effective and helped reduce the no. of escapes. One hundred and fifty eight transgenic *Polaris* and sixty six transgenic *Golden Polaris* plants were obtained with different N gene constructs. The cultivar *Iridon* was also transformed with the three N gene constructs, and two hundred and seventy three independent transgenic lines were recovered. These results demonstrate the efficiency of the procedures used to transfer genetic material into the genome of chrysanthemum cultivars recalcitrant to regeneration.

L19 ANSWER 15 OF 12 CAPLUS COPYRIGHT 2002 ATF

AB Hairy roots were obtained after infection of *Artemisia absinthium* shoots with *Agrobacterium rhizogenes* strains 1457 and LBA 5402. The susceptibility to hairy root transformation varied between plant genotypes and bacterial strains. Hairy roots showed macroscopic differences from control root cultures. Southern blot hybridization confirmed the integration of T-DNA from both p1855 and **pBin19**, while polymerase chain reaction anal. indicated the presence of the **neomycin phosphotransferase** gene in the hairy root genome. Subcultured transformed root lines grew well in selective R5 agar-solidified medium contg. kanamycin or rifampicin and without

hormones. Shake-flask expts. with fast-growing root lines showed that 4% g/l was the best sucrose concn. for biomass prodn., yielding a 463-fold increase in dry wt. after 27 days of culture. Great differences were found in the profiles of the essential oils isolated from normal and hairy roots. Gas chromatog./mass spectrometry anal. showed the oil produced by transformed cultures to be a mixt. of 16 compn. with only one major component representing 37% of the oil content.

118 ANSWER 10 OF 21 CARLOS COPYRIGHT 2001 A.M.

AB Phosphoenolpyruvate carboxylase (EC 4.1.1.1) is a key enzyme in C₄-dicarboxylic acid assimilation, and represents a wide range of advantage to the photosynthetic properties of C₄ plants. The direct transfer of C₄-photosynthetic system, esp. PEPCase, into C₃ plant became a potential approach to improve the photosynthetic rate of C₃ plants. In this paper, a C₄-PEPCase cDNA from Zea mays was transferred into a C₃ plant tobacco, and a transgenic plant was constructed for further studies on the expression of C₄-PEPCase gene in C₃ plant as well as the modulation of photosynthetic system in C₃ plants. A 2.8 kb fragment of C₄-PEPCase cDNA derived from a maize PEPCase cDNA clone p8P3-8F was subcloned into binary vector **pBin19**, and transconjugated into *Agrobacterium tumefaciens* retaining vir helper plasmid 15A4404 by means of 'tri-parental mating'. Then the engineering plasmid **pBPC1** harboring C₄-PEPCase cDNA was transformed into the leaf disk of tobacco by co-culture with transconjugated *A. tumefaciens*. Antisilencer screening yielded a patch of transformants resistant to kanamycin and the regenerated transgenic tobacco was obtained. The assay for **neomycin** phosphotransferase II (NPT II) showed a frequency of 80%, implying that the C₄-PEPCase cDNA neighboring the NPT II gene might have been transferred into tobacco cell. Southern blotting anal. provided further evidence that the PEPCase cDNA was stably integrated into the tobacco genome, promising the possibility of getting substantial expression of C₄-PEPCase gene in C₃ plants.

119 ANSWER 11 OF 21 CARLOS COPYRIGHT 2001 A.M.

AB In vitro regeneration and ballistic transformation procedures were developed for several com. chrysanthemum (*Chrysanthemum grandiflorum* Tzvelev, syn. *Chrysanthemum indicum* Karst.) cultivars using leaf and stem explants. Studies on the effect of several growth regulators and kanamycin on chrysanthemum regeneration were conducted, and a step-wise procedure to optimize kanamycin selection and recovery of transgenic plants was developed. A population of putative transformed chrysanthemum plants cvs. Blush, Dark Bronze Charm, Indigo, and Tara, was obtained after bombardment with tungsten microprojectiles coated with the binary plasmid **pBIN19** contg. the nucleocapsid (N) gene of tobacco spotted wilt virus (TSWV) and the marker gene **neomycin** phosphotransferase II (NPT II). PCR anal. of 10 putative transgenic plants selected on kanamycin indicated that the majority of the lines (89%) were transformed and contained both genes (7%). However, some transgenic lines contained only one of the genes: either the NPT II (15%) or the TSWV (N) gene (14%). Southern blot anal. on selected transgenic lines confirmed the integration of the TSWV (N) gene into the chrysanthemum genome. These results demonstrate the development of an efficient procedure to transfer genetic material into the chrysanthemum genome and selectively regenerate transgenic chrysanthemum plants at frequencies higher than previously reported.

119 ANSWER 12 OF 21 CARLOS COPYRIGHT 2001 A.M.

AB A method for selecting transgenic plants based in the polymerase chain reaction (PCR) is proposed. It is applicable to primary screening of transgenic plants obtained by copultivation with *Agrobacterium* which contains any vector carrying **neomycin** phosphotransferase genes from transposon Tn5 and *Streptococcus* (for example **pBIN19**). These genes confer kanamycin resistance in plants and bacteria resp. The absence of strong homol. between these two genes allows one to perform two PCRs in the same reaction mixt. Thus simultaneous selection of transgenic

plants and identification of *Agrobacterium* contamination are possible. A simple procedure for prepreg. small samples of plant DNA suitable for PCR analysis is also presented.

119 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB The defective gene encoding **neomycin** phosphotransferase (NPTII) present in the binary plasmid vector, **pBin19**, was replaced with the wild-type (wt) gene. Plasmid vectors analogous to **pBin19**, **pB1121** and **pB1141** were constructed carrying the gene encoding the wt NPTII enzyme activity.

119 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB Cucumber (*Cucumis sativus* L.) petiole and leaf segments of two pickling genotypes were transformed with *A. tumefaciens* strain LEA 4404, an octopine Ti-plasmid deletion mutant that is avirulent (disarmed plasmid), but to which were added T-DNA inserts in binary plasmids (**pBIN 19**, ca. 10 kb, and **pCEN 743**, ca. .6 kb). Expression of **neomycin** phosphotransferase (NPT II) encoding resistance to the aminoglycoside kanamycin was used as a selectable marker. Factors which influenced the frequency of callus development on medium contg. kanamycin (75 mg l⁻¹) were explant size, bacterial strain, and length of exposure, cocultivation period, and presence of acetosyringone. The optimal procedure involved exposing segments of petiole (4-6 mm x 1 mm x 0.5 cm²) segments to a bacterial suspension (10⁸ cells ml⁻¹ contg. 50 µM acetosyringone for 5 min, followed by a 48 h cocultivation period on a tobacco feeder layer. Explants were placed on MS medium contg. 100 mg l⁻¹ carbenicillin, 75 mg l⁻¹ kanamycin, and NAA/BA (5.0/2.5 µM) or 2,4-D/BA (5.0/0.1 µM) and subcultured twice, each after a 3-6 wk period, onto fresh media. The overall frequency of transformed callus was 10-50%; the frequency of plantlet regeneration from transformed callus was 4-15%. Twenty-one out of 13 individual plants recovered from two genotypes of pickling cucumber were NPT II pos. (transformation frequency of 80%). Copy no. of the NPT II gene insert (35S-NPT II-3' fragment, ca. 3.2 kb) in 3 transformed plants was estd. at 10 per haploid genome, indicative of multiple insertions within the cucumber genome. Multimers of the gene (visible as 4.4 and 6.6 kb fragments in Southern anal.) were detected in the plant, suggestive of tandem duplications or repeats. Inbreeding cross between this transformed plant and a nontransformed control showed segregation for the NPT II gene in dot-blot assays; at least 14 plants out of 12 were kanamycin pos. Copy no. in the progeny was variable, and ranged 0-10.

119 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB Co-transformation of tobacco (*Nicotiana glauca*) leaf explants with *Agrobacterium* (hmg genes harboring **pH135**) and the binary vector **pBin19** was achieved at a frequency of 47%. The kanamycin-resistant hairy roots were cultured via a callusing phase to regenerate plants which were partially fertile when out-crossed with wild-type pollen. Phenotypic and mol. anal. of the F1 progeny demonstrated the efficient segregation of the hairy root marker from the kanamycin resistance marker, enabling morphol. normal plants to be recovered which retained the binary vector marker gene. This co-transformation strategy provides a means of introducing non-selectable genes into plants in cases where antibiotic resistance markers are undesirable.

119 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2002 ACS

AB Two disarmed Ti-binary vectors in *A. tumefaciens* were used to produce viable transgenic strawberry plants. Fertile strawberry plants with a normal phenotype were regenerated after transformation with **pBIN6**, which carries genes for nopaline synthase (nos) and **neomycin** phosphotransferase (nptII) (conferring kanamycin resistance). The transfer and expression of the two genes was confirmed by Southern blot anal., the detection of nopaline synthase (NOS) activity in vegetative and reproductive tissues and rooting in vitro in the presence of kanamycin.

The nos gene continued to be expressed in glasshouse-grown plants many months after removal from in vitro growth conditions. After selfing the F0 plants nos segregated in the F1 progeny according to a 3:1 Mendelian ratio. In in vitro germinated seedlings there was complete correlation between the presence of nopaline synthase activity and the ability of leaf segments to produce callus on a medium contg. kanamycin. Transgenic clones that exhibited an abnormal phenotype associat. with cytokinin overprodu. were produced when plants were transformed with pSS1, a deriv. of pBIN19 carrying both the nptII gene and the ipt gene encoding the enzyme isopentenyltransferase). Shoots of these clones grew in hormone-free media, could not be induced to root and their growth was unaffected by the presence of 30 mg/ml kanamycin in hormone-free media.

=> d 119 11-22

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(Y)/N:Y

L19 ANSWER 11 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1946:376301 BIOSIS
DN BA 0:62446
TI AGROBACTERIUM-MEDIATED TRANSFORMATION OF THE CULTIVATED STRAWBERRY
FRAGARIA-ANANASSA LUCH. USING DISARMED BINARY VECTORS.
AU JAMES D J; PASSEY A J; BAHEARA D J
CS INST. HORTICULTURAL RESEARCH, EAST MALLING, MASTSTONE, KENT, ME19 6BJ, UK.
SO PLANT SCI LIMERICK, (1991) 69 (1), 79-84.
COPEN: HUSCE4. ISSN: 0168-8452.
FS BA; OLD
LA English

L19 ANSWER 12 OF 12 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 96309067 EMBASE
DN 199329067
TI Screening of transgenic plants using polymerase chain reaction.
AU Bogomolov L.; Shilpa O.A.; Skryabin K.B.
CS Centre of Bioengineering, Russian Academy of Sciences, Moscow 117984,
Russian Federation
SO Molekulyarnaya Biologiya, (1993) 27/4 (947-951).
ISSN: 0026-8984 CODEN: MOBIBO
CY Russian Federation
DT Journal; Article
FS 021 Human Genetics
022 Clinical Biochemistry
LA Russian
SL English; Russian

L19 ANSWER 13 OF 12 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 96309448 EMBASE
DN 199309448
TI Modified binary plant transformation vectors with the wild-type gene
encoding NPTII.
AU La L S.S.; Hammerlindl J.K.; Panchuk E.; Pelcher L.E.; Keller W.
CS Plant Biotechnology Institute, 110 Gymnasium Road, Saskatoon, Sask. S7N
6L6, Canada
SO Gene, (1992) 122/1 (383-384).
ISSN: 0378-1119 CODEN: GENED6
CY Netherlands
DT Journal; Article
FS 004 Microbiology
LA English
SL English

L19 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2002 ACS
 AN 14-0467456 CAPLUS
 DN 14-0467456
 TI Agrobacterium tumefaciens versus biolistic-mediated transformation of the chrysanthemum cvs. Polaris and Golden Polaris with nucleocapsid protein genes of three tospovirus species
 AU Yejes, L. M.; Mittak, V.; Slightom, J. L.; Pang, S.-Z.; Gonsalves, D.
 CS Department of Plant Pathology, Cornell University New York State Agricultural Experiment Station, Geneva, NY, 14456, USA
 SO Acta Horticulturae (1999), 482(International Symposium on Cut Flowers in the Tropics, 1997, 209-218
 COPEN: AHORAL; ISSN: 0567-7572
 PB International Society for Horticultural Science
 DT Journal
 LA English
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L19 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2002 ACS
 AN 14-0467456 CAPLUS
 DN 14-0467456
 TI Agrobacterium-mediated transformation of Artemisia absinthium (wormwood) and production of secondary metabolites
 AU Kim, S.; Benatti, A.; Roselli, G.; Mancetti, D.; Schifi, S.; Magherini, R.
 CS Dipartimento di coltura vegetale, Università Firenze, Florence, I-50144, Italy
 SO Plant Cell Reports (1997), 16(10), 725-730
 COPEN: PCRRP; ISSN: 0721-7714
 PB Springer
 DT Journal
 LA English

L19 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2002 ACS
 AN 14-0467456 CAPLUS
 DN 14-0467456
 TI T. plasmid-related transformation of tobacco with C4-PEPCase cDNA from Zea mays
 AU Pang, Long-Yuan; Ling, Jun; Wang, Chao-Ming; Shi, Jiao-Nai
 CS Shanghai Institute of Plant Physiology, Chinese Academy of Sciences, Shanghai, 20012, Peop. Rep. China
 SO Zhanwu Shenli Xuebao (1995), 21(3), 281-8
 COPEN: CWSHIA; ISSN: 0257-4829
 DT Journal
 LA Chinese

L19 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2002 ACS
 AN 14-0467456 CAPLUS
 DN 14-0467456
 TI Biolistic transformation of chrysanthemum with the nucleocapsid gene of tobacco spotted wilt virus
 AU Yejes, Luz Marcela; Mittak, Veronica; Pang, Shenk-Zhi; Gonsalves, Carol; Slightom, Jerry L.; Gonsalves, Dennis
 CS Dep. Plant Pathology, Cornell Univ., Geneva, NY, 14456, USA
 SO Plant Cell Rep. (1995), 14(11), 694-6
 COPEN: PCRRP; ISSN: 0721-7714
 DT Journal
 LA English

L19 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2002 ACS
 AN 14-0467456 CAPLUS
 DN 14-0467456
 TI Screening of transgenic plants using polymerase chain reaction
 AU Babegimas, L.; Shulga, G. A.; Saryadin, K. G.
 CS Vsesoyuz. Nauch. Tsentr, Moscow, 117984, Russia

SO Mol. Biol. (Moscow) (1993), 27(4), 947-51
CODEN: MOBIRO; ISSN: 0026-8934
BT Journal
LA Russian

L19 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2002 ACS
AN 1993:95283 CAPLUS
DN 118:95283
TI Modified binary plant transformation vectors with the wild-type gene encoding NPTII
AU Latta, Paul S. S.; Hammerlindl, Joe K.; Panchuk, Barry; Pelcher, Lawrence E.; Keller, Wilf
CF Plant Biotechnol. Inst., Natl. Res. Coun. Canada, Saskatoon, SK, S7N 6W9, Can.
SO Gene (1992), 122(2), 383-4
CODEN: GENED6; ISSN: 0378-1119
BT Journal
LA English

L19 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2002 ACS
AN 1992:95361 CAPLUS
DN 118:95361
TI Factors influencing Agrobacterium tumefaciens mediated transformation and expression of kanamycin resistance in pickling cucumber
AU Simentov, G. S.; Alpert, K.; Tang, F. A.; Funja, Z. K.
CS Campbell Inst. Res. Technol., Campbell Soup Co., Davis, CA, 95616, USA
SO Plant Cell, Tissue Organ. Cult. (1992), 31(3), 185-93
CODEN: PTEEDJ; ISSN: 0167-6857
BT Journal
LA English

L19 ANSWER 41 OF 22 CAPLUS COPYRIGHT 2002 ACS
AN 1990:166749 CAPLUS
DN 113:166749
TI Recovery of morphologically normal transgenic tobacco from hairy roots co-transformed with Agrobacterium rhizogenes and a binary vector plasmid
AU Halanek, H.; Boulter, M. E.; Shirsat, A. H.; Croy, E. J.; Ellis, J. R.
CS Dep. Biol. Sci., Univ. Durham, Durham, RG12 6EY, UK
SO Plant Cell Rep. (1990), 9(2), 88-92
CODEN: PCREDS; ISSN: 0721-7714
BT Journal
LA English

L19 ANSWER 42 OF 22 CAPLUS COPYRIGHT 2002 ACS
AN 1990:110407 CAPLUS
DN 113:110407
TI Agrobacterium-mediated transformation of the cultivated strawberry (Fragaria x ananassa Duch.) using disarmed binary vectors
AU James, David J.; Passey, Andrew J.; Barbara, Derek J.
CS Inst. Hortic. Res., Maidstone/Kent, ME19 6BJ, UK
SO Plant Sci. (Limerick, Ire.) (1990), 69(1), 79-94
CODEN: PISCE4; ISSN: 0168-9452
BT Journal
LA English

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NEWS 7 Mar 13 TOXKIT no longer available
NEWS 8 Mar 12 TESTHEFMD no longer available
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=> s X69322

L1 6 X69322

=> d 11 1-6

L1 ANSWER 1 OF 6 AGRICOLA
AN 94:0538 AGRICOLA
DN IN22040/233
TI Molecular characterization of a cDNA clone encoding glutamine synthetase from a gymnosperm, *Pinus sylvestris*.
AU Canton, F.R.; Garcia-Gutierrez, A.; Gallardo, F.; Vicente, A. De; Canovas, F.M.
AV ENAL (QK711.P62)
SO Plant molecular biology, Aug 1993. Vol. 22, No. 5. p. 819-828
Publisher: Dordrecht : Kluwer Academic Publishers.
CODEN: PMBIDE; ISSN: 0167-4412
NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L1 ANSWER 2 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:499949 BIOSIS
DN PREV199306123956
TI The U6 snail nuclear RNA gene family of potato.
AU Guerinot, P. (1); Waucho, F.
CS (1) Dep. Botany, Univ. Leicester, University Road, Leicester LE1 7RH UK
SO Plant Molecular Biology, (1993) Vol. 22, No. 5, pp. 807-818.
ISSN: 0167-4412.
DT Article
LA English

L1 ANSWER 3 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:499948 BIOSIS
DN PREV199306123956
TI Molecular characterization of a cDNA clone encoding glutamine synthetase from a gymnosperm, *Pinus sylvestris*.
AU Canton, Francisco R.; Garcia-Gutierrez, Angel; Gallardo, Fernando; De Vicente, Antonio; Canovas, Francisco M. (1)
CS (1) Lab. Biopimica Biologia Molecular, Univ. Malaga, E-29071 Malaga Spain
SO Plant Molecular Biology, (1993) Vol. 22, No. 5, pp. 819-828.
ISSN: 0167-4412.
DT Article
LA English

L1 ANSWER 4 OF 6 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 94:0538 EMBASE
TI The glutamine synthetases of rhizobia: Phylogenetics and evolutionary implications.
AU Turner S.L.; Young J.P.W.

CS S.L. Turner, Department of Biology, University of York, P.O. Box 373, York
 YO10 5YW, United Kingdom. slt1@york.ac.uk
 JO Molecular Biology and Evolution, (2000) 17/2 309-319).
 Refs: 41
 ISSN: 0737-4038 CODEN: MBEVEJ
 QY United States
 DT Journal; Article
 FD 004 Microbiology
 LA English
 CL English

L1 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:132030 CAPLUS
 DN 132:162030
 TI Poplar trees containing a constitutively expressed pine glutamine
 synthetase transgene for improved nitrogen metabolism
 IN Kirby, Edward G.; Canovas Ramis, Francisco; Gallardo Alba, Fernando
 PA Rutgers, the State University of New Jersey, USA
 SO PCT Int. Appl., 50 pp.
 CODEN: PIKXDC
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 200001972	A1	20000314	WO 1999-US18267	19990811
W: AE, AL, AM, AT, AU, AV, BA, BB, BC, BR, BY, CA, CH, CN, CR, CU, DE, DF, DK, DM, EE, EF, FI, GB, GC, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KH, KR, LZ, LE, LR, LS, LT, LU, LV, MD, ME, MF, MG, MW, MX, NY, NZ, PL, PT, PQ, RU, SD, SE, SG, SI, SK, SL, TL, TM, TR, TT, UA, UC, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, EG, FE, FM, FU, GJ, GN FW: BE, BN, BF, BS, BW, BL, SI, S2, US, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GE, GR, HE, IE, LU, MC, ML, PT, SE, BF, BJ, CF, CG, CI, CM, CA, CN, GW, HM, ME, NE, SN, TL, TG AU 9957734 A1 20000316 AU 1999-57734 19990811 FRAI US 1998-06031 P 19980311 WO 1999-US18167 W 19990811				

FE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE FE FORMAT

L1 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS
 AN 1999:060314 CAPLUS
 DN 119:203834
 TI Molecular characterization of a cDNA clone encoding glutamine synthetase
 from a gymnosperm, Pinus sylvestris
 AU Canton, Francisco R.; Garcia-Butierrez, Angel; Gallardo, Fernando; de
 Vicente, Antonio; Canovas, Francisco M.
 CS Fac. Cienc., Univ. Malaga, Malaga, E-29011, Spain
 SO Plant Mol. Biol. (1999), 22 (5), 819-28
 CODEN: PMABDI; ISSN: 0167-4412
 DT Journal
 LA English

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COST IN U.S. DOLLARS	ENTRY	SESSION
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0.48	13.44

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=> s glutamine(w synthetase and plant
L2 3064 GLUTAMINE(W SYNTHETASE AND PLANT

=> s 12 and gymnosperm
L2 54 L2 AND GYMNOSPERM

=> s 13 and pinus
L4 16 L3 AND PINUS

=> s 14 and transform?
L5 2 L4 AND TRANSFORM?

=> d 11 1-2

L1 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2001:871-88 BIOSIS

DN PREV2001:871-882

TI The promoter of a cytosolic **glutamine synthetase** gene
from the conifer **Pinus sylvestris** is active in cotyledons of
germinating seeds and light-regulated in transgenic *Arabidopsis thaliana*.
AU Avila, Conception; Cantin, Francisco R.; Barnstein, Pilar; Suarez,
Maria-Fernanda; Marracini, Pierre; Rey, Manuel; Humara, Jaime M.; Ordas,
Ricardo; Canovas, Francisco M. (1)

CS (1) Departamento de Biología Molecular y Bioquímica, Instituto Andaluz de
Biotecnología, Unidad Asociada UMA-CSIC, Universidad de Málaga, E-29071,
Málaga; canovas@uma.es Spain

SO Physiologia Plantarum, (July, 2001) Vol. 112, No. 3, pp. 388-396. print.
ISSN: 0031-9217.

DT Article

LA English

SL English

L1 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

AN 2000:133864 CAPLUS

DN 132:162939

TI Poplar trees containing a constitutively expressed pine **glutamine
synthetase** transgene for improved nitrogen metabolism

AU Kirby, Edward G.; Canovas Ramos, Francisco; Gallardo Alba, Fernando
FA Rutgers, the State University of New Jersey, USA

SL ECT Int. Appl., 30 pp.

COBEN: P1XAD4

DT Patent

LA English

RE.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI	WO 2000009726	A1	20000224	WO 1999-US18267	19990811
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MX, MY, NG, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TK, TR, TT, UA, UG, US, UZ, VN, YD, ZA, ZW, AM, AZ, BY, BG, BR, BS, BU, BT, CH, CN, CU, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, CA, GM, GW, ML, MR, NE, SN, TD, TG			
	EW:	SH, MI, PE, LS, MN, SD, SL, SZ, UG, ZA, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, CA, GM, GW, ML, MR, NE, SN, TD, TG			
	AU 9057724	A1	20010306	AU 1994-57734	19990811
PRAI	US 1999-96031P	P	19990811		
	WO 1999-US18167	W	19990811		
RE.CNT	3	THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

=> s 14 1-10

MISSING OPERATOR 14 1-10

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=> d 14 1-10

L4 ANSWER 1 OF 36 AGRICOLA

AN 1999:01141 AGRICOLA

DE IND21230780

TI Two different roles of early development and nitrogen assimilation in **gymnosperm** seedlings.

AU Garcia-Gutierrez, A.; Dubois, F.; Canton, F.R.; Gallardo, F.; Sangwan, R.S.; Canovas, F.M.

AV DNAI 40710.F68:

SO The Plant journal : for cell and molecular biology, Jan 1998, Vol. 13, No. 2, p. 187-194

Publisher: Oxford : Blackwell Sciences Ltd.

ISSN: 0960-7412

NTE Includes references

CY England; United Kingdom

DT Article

FS Non-U.S. Imprint other than PAC

LA English

L4 ANSWER 2 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2001:27333 BIOSIS

DE PRN20010724330

TI Molecular and enzymatic analysis of ammonium assimilation in woody **plants**.

AU Suarez, Maria-Fernanda; Avila, Concepcion; Gallardo, Fernando; Canton, Francisco R.; Garcia-Gutierrez, Angel; Gonzalo Claros, M.; Canovas, Francisco M. II.

CS (1) Departamento de Biologia Molecular y Bioquimica, Instituto Andaluz de Biotecnologia, Unidad Asociada UMA-CSIC, Universidad de Malaga, E28071, Malaga; canovas@uma.es Spain

SO Journal of Experimental Botany, (April, 2002) Vol. 53, No. 370, pp. 891-904. <http://jxb.oupjournals.org>. print.

ISSN: 0022-0957.

DT Article

LA English

L4 ANSWER 3 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2002:004222 BIOSIS
 DN PREV2002000368220
 TI Effect of nitrogen stress on growth, soluble metabolites, and **glutamine synthetase** activity of jack pine callus cultures.
 AU Carballo-Rivero, Gilda; Tremblay, M.-Francine (1); Charest, Christiane; Lalonde, Sylvie.
 CS (1) Chaire AFQ, Département des sciences appliquées, Université du Québec en Abitibi-Témiscamingue, 440 boul. de l'Université, Rouyn-Noranda, QC, J9X 5E4; francine.tremblay@uqat.quebec.ca Canada
 SO Journal of Plant Nutrition, (March, 2002) Vol. 25, No. 3, pp. 443-455. <http://www.tandf.co.uk/journals/product/productid/PMN.print>. ISSN: 0190-1367.
 DT Article
 LA English

 L4 ANSWER 4 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2001:037162 BIOSIS
 DN PREV20010037162
 TI The promoter of a cytosolic **glutamine synthetase** gene from the conifer *Pinus sylvestris* is active in cotyledons of germinating seeds and light-regulated in transgenic *Arabidopsis thaliana*.
 AU Avila, Concepción; Canton, Francisco R.; Barnestein, Pilar; Suarez, Maria-Fernanda; Marraschini, Pierre; Rey, Manuel; Humara, Jaime M.; Ordas, Ricardo; Canovas, Francisco M. (1)
 CS (1) Departamento de Biología Molecular y Bioquímica, Instituto Andaluz de Biotecnología, Unidad Asociada UMA-CSIC, Universidad de Málaga, E-29071, Málaga; canovas@uma.es Spain
 SO Physiologia Plantarum, (July, 2001) Vol. 112, No. 3, pp. 388-396. print. ISSN: 0031-9317.
 DT Article
 LA English
 SL English

 L4 ANSWER 5 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2001:192113 BIOSIS
 DN PREV20010192113
 TI Effect of phosalone herbicide on nitrogen metabolism in *Pinus radiata* and *Laccaria bicolor*.
 AU Gonzalez-Rodriguez, M. E.; Iriberril, N.; Irujo-Arispe, M. E.; Leizaola-Pelsamain, I.; Gonzalez-Munoz, C. (1)
 CS (1) Department of Plant Biology and Ecology, University of The Basque Country, E-48940, Leizor; gvgomb@leizor.ehu.es Spain
 SO Phytin (Hain), (2000) Vol. 40, No. 4, pp. 71-77. print. ISSN: 0070-2447.
 DT Article
 LA English
 SL English

 L4 ANSWER 6 OF 16 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2001:193110 BIOSIS
 DN PREV20010193110
 TI Spatial and temporal expression of two cytosolic **glutamine synthetase** genes in Scots pine: Functional implications on nitrogen metabolism during early stages of conifer development.
 AU Avila, Concepción; Suarez, Maria-Fernanda; Gomez-Maldonado, Josefa; Canovas, Francisco M. (1)
 CS (1) Departamento de Biología Molecular y Bioquímica, Facultad de Ciencias, Instituto Andaluz de Biotecnología, Universidad de Málaga, Campus Universitario de Teatinos s/n, E-29071, Málaga; canovas@uma.es Spain
 SO Plant Journal, (January, 2001) Vol. 35, No. 1, pp. 93-102. print. ISSN: 0969-7412.
 DT Article
 LA English

SL English

L4 ANSWER 7 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:298481 BIOSIS

DN PEEV2000001393491

TI Two genes encoding distinct cytosolic **glutamine synthetases** are closely linked in the pine genome.

AU Avila-Saenz, Concepcion (1); Munoz-Chapuli, Ramon; Plomion, Christophe; Ringelle, Jean-Marie; Canovas, Francisco M.

CS (1) Departamento de Biologia Molecular y Bioquimica, Facultad de Ciencias e Instituto Andaluz de Biotecnologia, Universidad de Malaga, Campus de Teatinos s/n, E-29071, Malaga Spain

SO FEBS Letters, (01 July, 2000) Vol. 477, No. 3, pp. 237-243. print.
ISSN: 0014-5793.

DT Article

LA English

SL English

L4 ANSWER 8 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:177985 BIOSIS

DN PEEV200100377985

TI Compression wood-responsive proteins in developing xylem of maritime pine (**Pinus pinaster** Ait.

AU Plomion, Christophe (1); Pionneau, Cedric; Brech, Jean; Costa, Paulo; Edlhofer, Petri

CS (1) Equipe de Genetique et Amelioration des Arbres Forestiers, Institut National de la Recherche Agronomique, 33610, Pierroton France

SO Plant Physiology (Rockville), (July, 2000) Vol. 123, No. 3, pp. 959-969. print.
ISSN: 0032-0889.

DT Article

LA English

SL English

L4 ANSWER 9 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:160712 BIOSIS

DN PEEV200000360712

TI Expression analysis of a cytosolic **glutamine synthetase** gene in cotyledons of Scots pine seedlings: Developmental, light regulation and spatial distribution of specific transcripts.

AU Canton, Francisco R.; Suarez, Maria-Fernanda; Jose-Estanyol, Matilde; Canovas, Francisco M. (1)

CS (1) Laboratorio de Bioquimica y Biologia Molecular, Facultad de Ciencias, Instituto Andaluz de Biotecnologia, Universidad de Malaga, 29071, Malaga Spain

SO Plant Molecular Biology, (July, 2000) Vol. 40, No. 4, pp. 623-634. print.
ISSN: 0167-4412.

DT Article

LA English

SL English

L4 ANSWER 10 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1999:445847 BIOSIS

DN PEEV199900445847

TI Expression analysis of a cytosolic **glutamine synthetase** gene in cotyledons of Scots pine seedlings: Developmental, light regulation and spatial distribution of specific transcripts.

AU Canton, Francisco R.; Suarez, Maria-Fernanda; Jose-Estanyol, Matilde; Canovas, Francisco M. (1)

CS (1) Laboratorio de Bioquimica y Biologia Molecular, Facultad de Ciencias-Instituto Andaluz de Biotecnologia, Universidad de Malaga, 29071, Malaga Spain

SO Plant Molecular Biology, (July, 1999) Vol. 40, No. 4, pp. 623-634. print.
ISSN: 0167-4412.

DT Article
LA English
SL English

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L6 ANSWER 1 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2001:16120 BIOSIS

DN PREV210100268323

TI Metabolic and enzymatic analysis of ammonium assimilation in woody plants.

AU Claver, Maria Fernanda; Avila, Concepcion; Gallardo, Fernando; Canton, Francisco R.; Garcia-Gutierrez, Angel; Gonzalo Claros, M.; Canovas, Francisco M. (1)

CS (1) Departamento de Biologia Molecular y Bioquimica, Instituto Andaluz de Biología, Unidad Asociada UMA-CSIC, Universidad de Malaga, E29071, Malaga; canovas@uma.es Spain

SO Journal of Experimental Botany, (April), 2001 Vol. 53, No. 370, pp. 831-844. <http://jxb.oxfordjournals.org/print>. ISSN: 0022-0857.

DT Article

LA English

L6 ANSWER 2 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2001:16120 BIOSIS

DN PREV210100268323

TI Effect of nitrogen stress on growth, soluble metabolites, and glutamine synthetase activity of jack pine callus cultures.

AU Carlier, Robert; Gilec, Tremblay, M-Francine (1); Charast, Christiane; Lalonde, Sylvie

CS (1) Centre AFD, Departement des sciences appliquees, Universite du Quebec en Abitibi-Temiscamingue, 445 boul. de l'Universite, Rouyn-Noranda, QC, J9X 5S4; francine.tremblay@uqat.quebec.ca Canada

SO Journal of Plant Nutrition, (March), 2002 Vol. 15, No. 3, pp. 443-455. <http://www.tandf.co.uk/journals/product/productid/PLN>. print. ISSN: 0190-4167.

DT Article

LA English

L6 ANSWER 3 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2001:16102 BIOSIS

DN PREV21010031002

TI The promoter of a cytosolic glutamine synthetase gene from the conifer *Pinus sylvestris* is active in cotyledons of germinating seeds and light-regulated in transgenic *Arabidopsis thaliana*.

AU Avila, Concepcion; Canton, Francisco R.; Barnstein, Pilar; Suarez, Maria-Fernanda; Marracini, Pierre; Fey, Manuel; Humara, Jaime M.; Ordas, Ricardo; Canovas, Francisco M. (1)

CS (1) Departamento de Biologia Molecular y Bioquimica, Instituto Andaluz de Biología, Unidad Asociada UMA-CSIC, Universidad de Malaga, E-29071, Malaga; canovas@uma.es Spain

SO Physiologia Plantarum, (July), 2001 Vol. 112, No. 3, pp. 388-396. print. ISSN: 0031-9317.

DT Article

LA English

SL English

L6 ANSWER 4 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2001:103110 BIOSIS

DN PREV20010103110

TI Spatial and temporal expression of two cytosolic **glutamine synthetase** genes in Scots pine: Functional implications on nitrogen metabolism during early stages of conifer development.

AU Avila, Concepcion; Suarez, Maria Fernanda; Gomez-Maldonado, Josefa; Canovas, Francisco M. (1)

CS (1) Departamento de Biologia Molecular y Bioquimica, Facultad de Ciencias, Instituto Andaluz de Biotecnologia, Universidad de Malaga, Campus Universitario de Teatinos s/n, E-29071, Malaga; canovas@um.es Spain.

SO Plant Journal, (January, 2001 Vol. 25, No. 1, pp. 93-102. print. ISSN: 0968-7412.

DT Article

LA English

SL English

L6 ANSWER 5 OF 32 CAPLUS COPYRIGHT 2002 ACS

AN 2000:1:3984 CAPLUS

DN 132:16.009

TI Poplar trees containing a constitutively expressed pine **glutamine synthetase** transgene for improved nitrogen metabolism

IN Kirby, Edward G.; Canovas Ramos, Francisco; Gallardo Alba, Fernando

PA Rutgers, the State University of New Jersey, USA

SO PCT Int. Appl., 50 pp.

CODEN: PIMKDI

DT Patent

LA English

PER.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000004725	A1	20000524	WO 1999-US18267	19990811
	W:	AE, AI, AM, AT, AU, AX, BA, BE, BG, BF, BY, CA, CE, CN, CR, CU, CC, CF, DK, EM, FE, EG, FI, GE, GD, GE, GH, GM, HE, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LF, LS, LT, LU, LV, MD, ME, MG, MN, MW, MX, NC, NZ, PI, PT, PC, PE, SD, SE, SG, SI, SK, SL, TM, TN, TR, TT, UA, UG, US, VE, VN, YU, ZA, ZW, AM, AZ, BY, ES, GE, ME, RU, TC, TM			
	FW:	GB, GM, KE, LS, MW, SD, SL, SE, SG, SW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GE, GR, IE, IT, LU, MC, NL, PT, SE, BF, EJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AD 9957734	A1	20000306	AJ 1994-57734	19990811
PRAI	US 1998-98031P	P	19980311		
	WO 1999-0318267	W	19990811		

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2000:1:3985 BIOSIS

DN PREV2000103110

TI Compression wood-responsive proteins in developing xylem of maritime pine (*Pinus pinaster* Ait.

AU Flomelin, Christophe (1); Pionneau, Cedric; Brach, Jean; Costa, Paulo; Bailleres, Henri

CS (1) Equipe de Genetique et Amelioration des Arbres Forestiers, Institut National de la Recherche Agronomique, 33410, Pierrerot France

SO Plant Physiology (Rockville), (July, 2000) Vol. 123, No. 3, pp. 959-969. print.

ISSN: 0032-0889.

DT Article

LA English

SL English

L6 ANSWER 7 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2000:360712 BIOSIS
 DN PREV20000360712
 TI Expression analysis of a cytosolic **glutamine synthetase**
 gene in cotyledons of Scots pine seedlings: Developmental, light
 regulation and spatial distribution of specific transcripts.
 AU Canton, Francisco R.; Suarez, Maria-Fernanda; Jose-Estanyol, Matilde;
 Canovas, Francisco M. (1)
 CS (1) Laboratorio de Bioquímica y Biología Molecular, Facultad de Ciencias,
 Instituto Andaluz de Biotecnología, Universidad de Málaga, 29071, Málaga
 Spain
 SO Plant Molecular Biology, (July, 2000) Vol. 40, No. 4, pp. 623-634. print.
 ISSN: 0167-4412.
 DT Article
 LA English
 SL English

L6 ANSWER 8 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 1
 AN 2000:398431 BIOSIS
 DN PREV20000398431
 TI Two genes encoding distinct cytosolic **glutamine**
synthetases are closely linked in the pine genome.
 AU Avila Saez, Christophe (1); Munoz-Chapuli, Ramon; Plomion, Christophe;
 Frigerio, Jean-Marie; Canovas, Francisco M.
 CS (1) Departamento de Biología Molecular y Bioquímica, Facultad de Ciencias
 e Instituto Andaluz de Biotecnología, Universidad de Málaga, Campus de
 Teatinos s/n, E-29071, Málaga Spain
 SO FEBS Letters, (21 July, 2000) Vol. 477, No. 3, pp. 237-243. print.
 ISSN: 0014-5793.
 DT Article
 LA English
 SL English

L6 ANSWER 9 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 2001:192373 BIOSIS
 DN PREV20010192373
 TI Effect of pho-phosphatidic acid herbicide on nitrogen metabolism in
Pinus radiata and **Laccaria bicolor**.
 AU Gonzalez-Mora, M. E.; Iriberry, N.; Dunabeitia, M. K.;
 Lorente-Beltramin, I.; Gonzalez-Murua, C. (1)
 CS (1) Department of Plant Biology and Ecology, University of The Basque
 Country, E-48940, Leizor: gvgomc@cc3.ehu.es Spain
 SO Phyton (Horn), (2000) Vol. 40, No. 4, pp. 71-77. print.
 ISSN: 0179-3047.
 DT Article
 LA English
 SL English

L6 ANSWER 10 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1999:455647 BIOSIS
 DN PREV19990455647
 TI Expression analysis of a cytosolic **glutamine synthetase**
 gene in cotyledons of Scots pine seedlings: Developmental, light
 regulation and spatial distribution of specific transcripts.
 AU Canton, Francisco R.; Suarez, Maria-Fernanda; Jose-Estanyol, Matilde;
 Canovas, Francisco M. (1)
 CS (1) Laboratorio de Bioquímica y Biología Molecular, Facultad de
 Ciencias-Instituto Andaluz de Biotecnología, Universidad de Málaga, 29071,
 Málaga Spain
 SO Plant Molecular Biology, (July, 1999) Vol. 40, No. 4, pp. 623-634.
 ISSN: 0167-4412.
 DT Article
 LA English

SL English

L6 ANSWER 11 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:35420 BIOSIS
EN FREE1998:35420
TI Effects of phosphinotricin treatment on **glutamine synthetase** isoforms in Scots pine seedlings.
AU Ayala, Concepcion; Garcia-Gutierrez, Angel; Crespilto, Remedios; Canovas, Francisco M. (1)
OR (1) Lab. Bioquim. Biol. Mol., Fac. Ciencias-Inst. Andaluz Biotecnol., Univ. Malaga, Campus de Teatinos, 29071 Malaga Spain
SO Plant Physiology and Biochemistry (Paris), (Dec., 1998) Vol. 36, No. 12, pp. 357-363.
ISSN: 0981-6418.
DT Article
LA English

L6 ANSWER 1 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:51613 BIOSIS
DN FREE1998:51613
TI Purification and characterization of NADP+-linked isocitrate dehydrogenase from Scots pine: Evidence for different physiological roles of the enzyme in primary development.
AU Palomo, Jesus; Gallardo, Fernando (1); Suarez, Maria F.; Canovas, Francisco M.
OR (1) Lab. Bioquimica Biol. Molecular, Fac. Ciencias, Univ. Malaga, E-29071 Malaga Spain
SO Plant Physiology (Rockville), (Oct., 1998) Vol. 118, No. 2, pp. 617-625.
ISSN: 0032-0789.
DT Article
LA English

L6 ANSWER 1 OF 11 AGRICOLA DUPLICATE 2
AN 1998:1543 AGRICOLA
DN INT119981
TI Two different modes of early development and nitrogen assimilation in **gymnosperm** seedlings.
AU Garcia-Gutierrez, A.; Dubois, F.; Canton, F.F.; Gallardo, F.; Sangwan, F.S.; Canovas, F.M.
AV ENAL (QF719.F66)
SO The Plant journal : for cell and molecular biology, Jan 1998. Vol. 13, No. 2, p. 187-198
Publisher: Oxford : Blackwell Sciences Ltd.
ISSN: 0969-5418
NTE Includes references
CY England; United Kingdom
DT Article
FS Non-U.S. reprint other than EAC
LA English

L6 ANSWER 14 OF 32 CAPIUS COPYRIGHT 2002 ACS
AN 1998:2299 CAPIUS
DN INT119981
TI Similar cDNA sequences are highly conserved among eukaryotic genomes
AU Estabace, L. J.; Kinlaw, C. S.; Williams, C. S.
OR Department of Biochemistry & Biophysics-Genetics, Texas A and M University, College Station, TX, 77843, USA
SO Texas Journal of Science (1998), 50(1), 75-84
CODEN: TJSCAH; ISSN: 0040-4403
PB Texas Academy of Science
DT Journal
LA English

L6 ANSWER 15 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1996:484937 BIOSIS
 DN PFEV1996092000393
 TI High-level expression of **Pinus sylvestris glutamine synthetase** in *Escherichia coli*: Production of polyclonal antibodies against the recombinant protein and expression studies in pine seedlings.
 AU Canton, Francisco R. (1); Garcia-Gutierrez, Angel; Crespiello, Remedios; Canovas, Francisco (1)
 CS (1) Lab. Bioquim. Biol. Mol., Fac. Ciencias, Univ. de Malaga, E-29071 Malaga Spain.
 SO FEBS Letters, (1996) Vol. 393, No. 2-3, pp. 205-210.
 ISSN: 0014-1798.
 DT Article
 LA English

L6 ANSWER 16 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1996:420894 BIOSIS
 DN PFEV199609105585
 TI Interactions of elevated CO₂, NH₃ and C-3 on mycorrhizal infection, gas exchange and N metabolism in saplings of Scots pine.
 AU Perez-Jorda, Maria (1); Eeck, Thomas A.; Eusepi, Sigliola; Kuiper, Pieter J. C.
 CS (1) Dep. Trop. Weed Sci., Res. Inst. Agrobiol. Soil Fertility (AB-DLO), P.O. Box 14, Bornsesteeg 65, 6700 AA Wageningen Netherlands
 SO Plant and Soil, (1995) Vol. 176, No. 1, pp. 107-116.
 ISSN: 0032-079X.
 DT Article
 LA English

L6 ANSWER 17 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:46693 BIOSIS
 DN PFEV199509060981
 TI Regulation of **glutamine synthetase** gene expression in Scots pine (*Pinus sylvestris* L.) seedlings.
 AU Ehlinger, Martin W. (1); Moar, Hans
 CS (1) Section Paediatriche Endokrinol., Kinderklinik Eberhard-Karls-Univ., Robert-Koch-Strasse 19-23, D-72070 Tuebingen Germany
 SO Moar, H.; Moar, K. Nova Acta Leopoldina, (1994) Vol. 70, No. 288, pp. 107-116. Nova Acta Leopoldina; The terrestrial nitrogen cycle as influenced by man.
 Publisher: Deutsche Akademie der Naturforscher Leopoldina
 August-Bebel-Strasse 50a, Halle (Saale), Germany.
 Meeting Info.: Symposium Halle/Saale, Germany; September 29-October 1, 1993
 ISSN: 0049-5634. ISBN: 3-335-00417-5.
 DT Book; Conference
 LA English

L6 ANSWER 18 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:44244 BIOSIS
 DN PFEV199508198514
 TI Nitrogen metabolism in cultured cotyledon explants of **Pinus radiata** during de novo organogenesis.
 AU Jy, Richard W. Iv; Bender, Ludwig; Thrope, Trevor A. (1)
 CS (1) Plant Physiol. Res. Group, Dep. Biol. Sci., Univ. Calgary, Calgary, AB T2N 1A4 Canada
 SO Physiologia Plantarum, (1994) Vol. 92, No. 4, pp. 681-688.
 ISSN: 0031-9314.
 DT Article
 LA English

L6 ANSWER 19 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1994:167576 BIOSIS
 DN PFEV199407075506
 TI Effect of atmospheric ammonia on the nitrogen metabolism of Scots pine

Pinus sylvestris) needles.

AB Perez-Soba, M. (1); Stulen, I.; Van Der Eerden, L. J. M.
CI (1) Dep. Plant Physiol., Res. Inst. Agrobiol. and Soil Fertility, P.O. Box
14, Bornsesteeg 65, 6700 AA Wageningen Netherlands
SO *Physiologia Plantarum*, (1994) Vol. 91, No. 4, pp. 629-636.
ISSN: 0031-9317.
DT Article
LA English

L6 ANSWER 20 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:449-60 BIOSIS
DN PREV1994:15:2996
TI Combined effects of gaseous ammonia and sulphur dioxide on the nitrogen
metabolism of the needles of Scots pine trees.
AU Perez-Soba, Marta (1 ; Van Der Eerden, Ludger; Stulen, Ineke
CI (1) Dep. Plant Physiol., Res. Inst. Agrobiol. Soil Fertility, P.O. Box 14,
Bornsesteeg 65, 6700 AA Wageningen Netherlands
SO *Plant Physiology and Biochemistry* (Montrouge), (1994) Vol. 32, No. 4, pp.
519-546.
ISSN: 0941-3424.
DT Article
LA English

L6 ANSWER 21 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:419-426 BIOSIS
DN PREV1994:4:4463
TI Appearance of nitrate reductase, nitrite reductase and **glutamine
synthetase** in different organs of the Scots pine (*Pinus
sylvestris*) seedling as affected by light, nitrate and ammonium.
AU Sehn, Bettina; Setzer, Bernhard; Flaig, Helger; Mohr, Hans (1)
CI (1) Regional Inst. II, Univ. Freiburg, Schaenzlestrasse 1, D-79104
Freiburg Germany
SO *Physiologia Plantarum*, (1994) Vol. 91, No. 3, pp. 419-426.
ISSN: 0031-9317.
DT Article
LA English

L6 ANSWER 17 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1991:511444 BIOSIS
DN PREV1991:9:11444
TI Gaseous ammonia counteracts the response of Scots pine needles to elevated
atmospheric carbon dioxide.
AU Perez-Soba, Marta (1; Van Der Eerden, Ludger J. M. (1); Stulen, Ineke;
Kluger, Pieter J. C.
CI (1) Dep. Plant Physiol., Res. Inst. Agrobiol. Soil Fertility, P.O. Box 14,
Bornsesteeg 65, 6700 AA Wageningen Netherlands
SO *New Phytologist*, (1994) Vol. 128, No. 2, pp. 307-313.
ISSN: 0028-646X.
DT Article
LA English

L6 ANSWER 11 OF 13 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:279-285 BIOSIS
DN PREV1994:92:11622
TI Enzymes of ammonium metabolism in ectoendomycorrhizal and ectomycorrhizal
symbionts of pine.
AU Rudawska, Maria (1; Kielbaszewska-Rakicka, Barbara; Debaud, Jean-Claude;
Lewandowski, Andrzej; Gay, Gilles
CI (1) Inst. Dendrology, Polish Academy Sci., PL-62-035 Kornik Poland
SO *Physiologia Plantarum*, (1994) Vol. 92, No. 2, pp. 279-285.
ISSN: 0031-9317.
DT Article
LA English

L6 ANSWER 24 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1994:199779 BIOSIS
 DN PREV1994971227
 TI Coaction of blue light and light absorbed by phytochrome in control of
glutamine synthetase gene expression in Scots pine (*Pinus sylvestris* L.) seedlings.
 AU Emlinger, M. W.; Bolle, C.; Batschauer, A.; Oelmueller, R.; Rott, H. G.
 CS (1 Biol. Inst. II der Univ., Schaenzlestr. 1, D-79104 Freiburg i.Br.
 Germany
 SO Planta (Heidelberg), (1994) Vol. 192, No. 2, pp. 189-194.
 ISSN: 0032-0935.
 DT Article
 LA English

L6 ANSWER 13 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:4011 BIOSIS
 DN PREV1995401351
 TI Activities and properties of **glutamine synthetase** and
 of glutamate dehydrogenase in scots pine needles (*Pinus*
syvestris) in relation to the habitat.
 AU Seiler, Dieter (1); Lintemann, Herbert (1); Moecker, Doreen (1);
 Thieringer, Carola (1); Jung, Klaus; Foerstel, Hilmar
 CS (1 Martin-Luther-Univ. Halle-Wittenberg, Fachbereich
 Biochemie/Biotechnologie, Inst. Biochemie, Abt. Allgemeine
 Pflanzenbiochemie, Weinbergweg 16a, D-06120 Halle Germany
 SO Angewandte Botanik, (1994) Vol. 68, No. 3-4, pp. 89-94.
 ISSN: 0066-1754.
 DT Article
 LA German
 SL German; English

L6 ANSWER 10 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1995:84117 BIOSIS
 DN PREV199584198317
 TI Nitrogen metabolism of Douglas fir and Scots pine as affected by optimal
 nutritional and water supply under conditions of relatively high
 atmospheric nitrogen deposition.
 AU Perez-Sica, Maria L.; De Visser, Pieter H. B.
 CS (1 Dep. Plant Physiol., Res. Inst. Agrobiol. Soil Fertility, PO Box 14,
 NL-6700 AA Wageningen Netherlands
 SO Trees (Berlin), (1994) Vol. 9, No. 1, pp. 19-25.
 ISSN: 1441-1885.
 DT Article
 LA English

L6 ANSWER 27 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 AN 1994:357466 BIOSIS
 DN PREV199437370466
 TI Seasonal fluctuations in the nitrogen assimilation of scots pine.
 AU Pietiläinen, Pekka
 CS Muhos Res. Station Finnish Forest Res. Inst., FIN 91500 Muhos, Dep. Bot.,
 Univ. Oulu, FIN-90570 Oulu Finland
 SO Acta Universitatis Ouluensis Series A Scientiae Rerum Naturalium, (1994)
 Vol. , No. 2-3, pp. 1-115, I-VIII.
 ISSN: 0355-3141.
 DT Article
 LA English

L6 ANSWER 14 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
 3
 AN 1993:499448 BIOSIS
 DN PREV199346123355
 TI Molecular characterization of a cDNA clone encoding **glutamine**
synthetase from a gymnosperm, *Pinus*

sylvestris.

AD Canton, Francisco R.; Garcia-Gutierrez, Angel; Gallardo, Fernando; De
Vicente, Antoni ; Canovas, Francisco M. (1)
QC (1) Lab. Bioquímica Biología Molecular, Univ. Malaga, E-29071 Malaga Spain.
QA Plant Molecular Biology, (1993), Vol. 32, No. 5, pp. 819-828.
ISSN: 0167-4322.
DT Article
LA English

L6 ANSWER 29 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1993:233524 BIOSIS

DN PREV199398121680

TI Ammonium Ion Inhibition of **Pinus strobus** L. callus growth.

AU Kaul, K. G.; Hiffman, S. A.

CS (1) CRS Plant and Soil Science Research, Kentucky State University,
Frankfort, KY 40601 USA

SO Plant Science (Dunelmick), (1993) Vol. 33, No. 2, pp. 169-173.
ISSN: 0168-9451.

DT Article

LA English

L6 ANSWER 30 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1993:212724 BIOSIS

DN PREV199398113300

TI Effect of ammonium on glutamate synthetase activity in ectomycorrhizal
fungi, and in mycorrhizal and non-mycorrhizal Scots pine seedlings.

AU Sargata, Pytti

CS Finn. For. Res. Inst., Parkano Res. Stn., SF-39700 Parkano Finland

SO Tree Physiology, (1993) Vol. 12, No. 1, pp. 93-100.
ISSN: 0929-6336.

DT Article

LA English

L6 ANSWER 31 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1993:1973 BIOSIS

DN PREV19939808933

TI Effects of famine on foliar nitrogen metabolism of **Pinus taeda** L.
and implications for carbohydrate metabolism.

AU Manderscheid, R. G.; Jaeger, R.-J.; Press, L. W.

CS (1) Institut Pflanzenekologie, Heinrich-Buff-Ring 38, D-6300 Giessen
Germany

SO New Phytologist, (1992) Vol. 121, No. 4, pp. 623-633.
ISSN: 0028-646X.

DT Article

LA English

L6 ANSWER 32 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1993:16905 BIOSIS

DN PREV19939813205

TI **Glutamine synthetase** in Scots pine seedlings and its
control by blue light and light absorbed by phytochrome.

AU Hellebronn, K. H.; Mohr, P. (1)

CS (1) Botanisches Inst. II der Univ., Schanzlestrasse 1, W-7800 Freiburg i
Br. Germany

SO Planta (Heidelberg), (1992) Vol. 188, No. 3, pp. 396-402.
ISSN: 0032-0935.

DT Article

LA English

=> d 16 10 14 15 17 24 25 32 36

L6 ANSWER 10 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB The expression of a cytosolic **glutamine synthetase**

(GS1; EC 6.3.1.2) gene was examined in cotyledons of Scots pine seedlings. Light strongly stimulated GS1 mRNA accumulation during development. Similarly, steady-state levels of GS1 transcripts increased in dark-grown seedlings to light and decreased in dark-adapted seedlings. Light/dark adaptation affected *psbS* and *psb27* mRNA levels and chlorophyll contents in the same manner. Light-grown seedlings in the presence of the herbicide norflurazon showed a drastic decrease in mRNA for GS and photosynthetic proteins, whereas the effect of the herbicide on mitochondrial RNA-ATP synthase mRNA was limited. These results indicate that factors associated with developing chloroplasts could be required for maximal GS1 gene expression during seedling development. The level of GS polypeptide, determined by immunoblot, was co-regulated during seedling development in the light or dark. However, the levels of the polypeptide detected were unaltered by the light/dark adaptation treatments. The analysis of GS1 mRNA association with polysomes indicated that the discrepancies between GS protein and mRNA levels are not a result of a differential translational rate of the transcript in darkness relative to light. Two GS isoforms with different isoelectric point were resolved by two-dimensional PAGE in light- and dark-germinated **plants**. The relative abundance of one isoform was markedly affected by light and correlated with the observed changes in GS mRNA, suggesting that the other form is not a product derived from the external transcript. In situ hybridization of explant sections showed the presence of GS1 mRNAs in mesophyll and palisade cells confirming gene expression in photosynthetic tissues. High levels of transcript were detected also in nonphotosynthetic cells of apical primordia. These data suggest a dual role for the GS1 gene associated with chloroplast development/activity and glutamine biosynthesis for nitrogen mobilization during early growth of Scots pine.

L6 ANSWER 14 OF 31 CAPLUS COPYRIGHT 1991 ACS
 AB Computer search algorithms for **Pinus taeda** cDNA sequences revealed that 20 of 41 **Pinus taeda** cDNA sequences had conserved homology to angiosperms, animals and/or other conifers. Ten of the 20 homologous sequences coded for highly conserved amino acid products among conifers, flowering **plants** and animals. Among the 20 homologous sequences, there were 12 highly conserved query sequences. These sequences code for RNA replication, RNA-coding protein, glycolysis and photosynthesis. A total of 24 **plant** species were identified with homologies to **P. taeda** cDNA sequences. Of these families, one family of conifers and one family of monocots were represented in the matches to **P. taeda**. The remaining 16 families were dicots. Using nucleotide sequences to infer evolutionary relationships among **plants** will improve as more **plant** genomic sequences drawn from a wider taxonomic spectrum are added to public databases.

L6 ANSWER 15 OF 30 BIOSIS COPYRIGHT 1991 BIOLOGICAL ABSTRACTS INC.
 AB In a previous work we reported the molecular characterization of a **glutamine synthetase** (GS; EC 6.3.1.2) complementary DNA from a woody **plant** (Ganton et al., 1990). **Plant** Mol. Biol. 23, 819-824). The isolated cDNA (pGSPl14) encoding a Scots pine (**Pinus sylvestris**) cytosolic subunit, has been subcloned into the expression vector pET3c to overproduce the GS polypeptide in *Escherichia coli* cells. The recombinant GS protein showed the same molecular size as a native Scots pine GS subunit. Antikidies against the pET3c-GSPl14 encoded protein were raised in rabbits by injecting purified preparations and specificity was determined by immunoprecipitation of GS activity present in pine crude extracts. In spite of the antikidies were able to recognize both cytosolic and chloroplastic GS in tomato **plants**, they were unable to immunodetect chloroplastic GS in green cotyledons of pine seedlings and cytosolic GS was the unique recognized polypeptide. Unlike to that found in other **plant** species, cytosolic GS was strongly expressed in green tissues as determined by protein and Northern analysis. Our results suggest a key role for cytosolic GS in photosynthetic tissues of conifers.

L6 ANSWER 17 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

L6 ANSWER 24 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB The level of plastidic **glutamine synthetase** (GS; EC 6.3.1.3) in the cotyledonary whorl of the Scots pine (*Pinus sylvestris* L.) seedling was previously reported to be regulated by light. In the present paper we report on the control by light of the GS transcript level. A full-length GS cDNA from Scots pine was isolated and employed to measure GS transcript levels. Using dichromatic light treatments it was found that the transcript level is regulated by phytochrome. The strong specific effect of blue light is to be attributed to an increase of the responsiveness to phytochrome. Since no direct correlation between the transcript level and the rate of GS protein synthesis was observed, it was concluded that GS gene expression is only coarsely regulated at the level of transcript accumulation. Synthesis of GS protein is by itself light-dependent (light-mediated fine tuning of gene expression). This control at the translational level is also exerted via phytochrome with blue light determining the responsiveness of the process toward phytochrome. If the level of the far-red absorbing form of phytochrome (Pfr) is kept very low, blue light is not capable of bringing about synthesis of GS protein.

L6 ANSWER 25 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Studies were carried out on the properties of **glutamine synthetase** and glutamate dehydrogenase determined in the needles of Scots pine *Pinus sylvestris* L. from three various air-polluted locations (relatively unpolluted, moderately, and heavily polluted areas). The enzymes were partially purified and characterized (K-m values, pH optima, temperature dependence, Co-2+ requirement). The **glutamine synthetase** activity from *P. sylvestris* grown in a polluted area is very diminished, on the other hand the glutamate dehydrogenase activity is slightly enhanced under such conditions. The enzyme activities were correlated with the natural ¹⁵N/¹⁴N isotope variations. The results are discussed with respect to the possible role of these enzymes in the nitrogen metabolism of conifers under different environmental stress conditions, particularly in terms of air pollution.

L6 ANSWER 31 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB The appearance of **glutamine synthetase** (GS; EC 6.3.1.2) in response to light and nitrogen (NO-3-, NH-4+) was studied in the organs (roots, hypocotyl, cotyledonary whorl) of the Scots pine (*Pinus sylvestris* L.) seedling. Although GS activity was found to be mainly (80-85%) located in the whorl where it increased strongly in response to light, a significant GS synthesis was also detected in dark-grown seedlings. Anion-exchange chromatography was used to resolve two GS isozymes which appeared to be regulated differentially in the cotyledonary whorls. The isoform (presumably plastidic GS2) which eluted from the column at 80 mM KCl increased markedly in response to light. The other isoform (presumably cytosolic GS1), which eluted at 200 mM KCl, was not stimulated by light but tended to disappear during the experimental period (4-12 d after sowing). Immunoblotting of pine extracts yielded a prominent band with a molecular weight of 43 kDa. The linear correlation between GS activity and immunoblotable GS protein could be extrapolated through GS1, showing that any increase of GS2 activity is to be attributed to the de-novo synthesis of GS activity is to be attributed to the de-novo synthesis of GS protein. Gel-filtration chromatography yielded a molecular mass for the GS holoenzyme of 340 kDa, a value which supports an octameric quaternary structure as previously suggested for angiosperms. While supplying seedlings with 10 mM NO-3- stimulated GS synthesis in the whorl by 1.8, 17 mM NH-4+ caused an incipient ammonium toxicity. Experiments using dichromatic light (simultaneous treatment with two light beams to vary the level of the physiologically active form of phytochrome, Pfr, in blue light) revealed

that synthesis of GS2 was controlled by light in the same way as previously shown for ferredoxin-dependent glutamate synthase (Fd-GOGAT; EC 1.4.7.1). Up to 10 d after sowing the strong light effect could be attributed to phytochrome action whereas between 10 and 12 d after sowing phytochrome control of GS-synthesis failed if no blue/ultraviolet-A light was provided. The data show that blue light is required to maintain responsiveness of GS2 synthesis to phytochrome. Both enzymes, GS2 as well as Fd-GOGAT, appear to be regulated coordinately to meet the demands of ammonium assimilation.

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L1 0 GLUTAMINE(W) SYNTHETASE AND FBIN AND 35S

=> s glutamine(w)synthetase and pbin

L1 0 GLUTAMINE(W) SYNTHETASE AND PBIN

=> s glutamine(w)synthetase and 35s and nos and npt

L1 0 GLUTAMINE(W) SYNTHETASE AND 35S AND NOS AND NPT

=> s glutamine(w)synthetase and transform

L1 42 GLUTAMINE(W) SYNTHETASE AND TRANSFORM

=> s glutamine(w)synthetase and transform and plant

L1 156 GLUTAMINE(W) SYNTHETASE AND TRANSFORM? AND PLANT

=> s glutamine(w)synthetase and transform and plant and 35s

L1 36 GLUTAMINE(W) SYNTHETASE AND TRANSFORM? AND PLANT AND 35S

=> s glutamine(w)synthetase and transform and plant and 35s and NOS

L1 1 GLUTAMINE(W) SYNTHETASE AND TRANSFORM? AND PLANT AND 35S AND NOS

=> s glutamine(w)synthetase and transform and plant and 35s and NOS and agrobacterium

L10 1 GLUTAMINE(W) SYNTHETASE AND TRANSFORM? AND PLANT AND 35S AND NOS AND AGROBACTERIUM

=> d 110 1

110 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS

111 2002:162046 CAPLUS

112 162046

113 Poplar trees containing a constitutively expressed pine **glutamine synthetase** transgene for improved nitrogen metabolism

IN Kirby, Edward G.; Canovas Ramos, Francisco; Gallardo Alba, Fernando

PA Rutgers, the State University of New Jersey, USA

SO PCT Int. Appl., 10 pp.

CODEN: PIXXDE

BT Patent

LA English

FAN.ONT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI	W	20000224	WO 1999-US18267	19990811
W: AE, AI, AM, AT, AU, AZ, BA, BB, BC, BK, BY, CA, CH, CN, CR, CU, CZ, DE, DF, DM, EE, EG, FI, GH, GI, GE, GR, HM, HU, ID, IL, IN, IS, JP, KE, KG, KH, KR, KZ, LC, LK, LS, LU, LV, MD, ME, MK, MN, MW, MX, NC, NZ, PL, PT, RD, RJ, SL, SR, SI, SK, SE, SM, ST, TH, TR, TT, UA, UG, US, VE, VN, YU, ZA, ZW, AZ, BY, EG, GR, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SS, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9957734	A1	20000305	AU 1998-57734	19990811
PRAI US 1998-96034F	P	1998-08-11		
WO 1999-US18267	W	1999-08-11		
REL.CNT 3	THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

=> d 19 1-2

L9 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS
 AN 2000:143844 CAPLUS
 DN 142:162044
 TI **Plants** containing a constitutively expressed **glutamine synthetase** transgene for improved nitrogen metabolism
 IN Kirby, Edward G.; Cantvas Ramis, Francisco; Gallardo Alba, Fernando
 PA Rutgers, the State University of New Jersey, USA
 SO ICT Int. Appl., 50 pp.
 CODEN: PIXX52
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FI	W	20000224	WO 1999-US18267	19990811
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AU 9957734	A1	20000305	AU 1998-57734	19990811
PRAI US 1998-96034F	P	1998-08-11		
WO 1999-US18267	W	1999-08-11		
REL.CNT 3	THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS
 AN 1997:568298 CAPLUS
 DN 127:215965
 TI **Transgenic plants** engineered for improved nitrogen metabolism/assimilation using vectors containing inducible promoters for recombinant expression of enzymes
 IN Good, Allen G.; Stroehrer, Virginia L.; Muench, Douglas G.
 PA Governors of the University of Alberta, Can.; Good, Allen G.; Stroehrer, Virginia L.; Muench, Douglas G.
 SO PCT Int. Appl., 44 pp.
 CODEN: PIXX52
 DT Patent
 LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9739163	A1	19970921	WO 1997-CA100	19970214
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US 6084113	A	20000004	US 1996-599968	19960214
AU 9715863	A1	19970902	AU 1997-15868	19970214
AU 727264	B1	20011107		
GB 2215132	A1	19981113	GB 1998-17304	19970214
GB 2315132	B2	20011124		
GB 2349558	A1	20001116	GB 2000-23359	19970214
PRAI CA 1996-2169502	A	19960214		
JS 1996-549968	A2	19960214		
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WO 1997-CA100	W	19970214		

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▶ Submitting Sequence Data to GenBank

The most important source of new data for GenBank® is direct submissions from scientists. GenBank depends on its contributors to help keep the database as comprehensive, current, and accurate as possible. NCBI provides timely and accurate processing and biological review of new entries and updates to existing entries, and is ready to assist authors who have new data to submit.

NOTE: The 'Authorin' submission tool and the E-mail submission form were phased out on December 31, 1998, and submissions made with those tools are no longer accepted as of that date. Instead, please use the improved submission tools, [BankIt](#) and [Sequin](#), described below.

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▶ Receiving an accession number for your manuscript

Most journals now expect that DNA and amino acid sequences that appear in articles will be submitted to a sequence database before publication. Soon after submission, you will receive an accession number from the database which you will be able to use in your article to refer to the sequence. Please be aware that it is only necessary to submit the sequence to one database, whichever one is most convenient, without regard for where the sequence may be published. Data exchange between GenBank, EMBL and DDBJ occurs daily. Sequence data submitted in advance of publication can be kept confidential if requested.

Below are described various ways of submitting DNA sequences to GenBank. Essentially, there are two principal ways, [BankIt](#) and [Sequin](#). [BankIt](#) is a Web submission tool and recommended for simple submissions. With [BankIt](#) you can indicate coding regions on an mRNA along with a product and gene name. For more control over annotating your entry, segmented records, or very long entries, [Sequin](#), a stand-alone

submission tool, is suggested.

GenBank will provide you with an accession number to identify your sequence, usually within two working days, if the submission is received via electronic mail. This accession number serves as confirmation that you have submitted your data, and allows the community to retrieve the data upon reading the journal article.

The accession number should be included in your manuscript, preferably in a footnote on the first page of the article, or as required by individual journal procedures.

► BankIt - submitting via the WWW

NCBI has developed a WWW form, called BankIt, for convenient and quick submission of sequence data.

BankIt allows you to enter sequence information into a form, edit as necessary, and add biological annotation (e.g., coding regions, mRNA features). BankIt transforms your data into GenBank format for your review and when your record is completed, it can be submitted directly to GenBank. You have the option of adding information by using text boxes to describe in your own words the source of the sequence and its biological features. The GenBank annotation staff reviews the submitted textual information, incorporates it into the appropriate structured fields, and returns the record by e-mail for your review.

BankIt is compatible with Netscape clients for Unix, Macs, and PCs. In addition, Internet Explorer for the PC and Mac have successfully been used.

► Sequin - stand-alone software for the Mac, PC/Windows, and UNIX

If you do not have access to the WWW, NCBI introduces a stand-alone submission program called Sequin.

Sequin is an interactive, graphically-oriented program based on screen forms and controlled vocabularies that guides you through the process of entering your sequence and providing biological and bibliographic annotation. Sequin is designed to simplify the sequence submission process and to provide graphical viewing and editing options. It incorporates robust error checking and accommodates very long sequences and complex annotations.

► Special submissions - genomes, batch sequences, alignments

Sequin can be used for the submission of individual or small numbers of sequences. However, it was also designed to facilitate special types of submissions, and should be used

instead of BankIt for the following types of submissions:
genomes and other very long sequences; multiple sequences
such as batch submissions and segmented sets; and
population/phylogenetic/mutation studies.

When preparing the submission of a genome, you can import the complete genome sequence into Sequin as well as a file containing the amino acid translations in FASTA format, if available. Sequin will automatically annotate the coding regions intervals based on the translations, and you can use Sequin to make further complex annotations. Sequin can also accept feature annotations in tab-delineated tables. Since the final submission file (*.sqn) will be quite large, please send it to the GenBank staff via FTP rather than by e-mail. To request a temporary FTP directory, please contact genomes@ncbi.nlm.nih.gov.

When preparing a submission that contains multiple sequences, you can import a single file containing all the sequences in FASTA format, or as alignments in FASTA+GAP, PHYLIP, or NEXUS format. In addition, for population/phylogenetic/mutation studies, you can annotate one sequence and propagate the features onto the other sequences. When you complete the submission and select the 'prepare submission' option in the 'File' menu, Sequin will prepare a single *.sqn file that contains all the sequences. Send the *.sqn file by e-mail to:

gb-sub@ncbi.nlm.nih.gov.

If you are submitting two or more Sequin files, each of which contains multiple sequences, send each *.sqn file in a separate e-mail message.

Please refer to the Sequin Quick Guide and documentation for additional information, both of which are accessible from the Sequin Web page.

► Sending the Data to GenBank

When using BankIt, the prepared sequence entries are submitted directly to GenBank through the WWW.

When using Sequin, the output files for direct submission should be sent to GenBank by electronic mail to:

gb-sub@ncbi.nlm.nih.gov

As an alternative, the submission file can be copied to floppy disk and mailed to GenBank Submissions at:

GenBank Submissions
National Center for Biotechnology Information
National Library of Medicine

Bldg. 38A, Room 8N-803
Bethesda, MD 20894

Please label the disk with your name and file name and indicate whether it is a PC or MAC disk.

► Updates

NCBI processes update requests as well as new submissions. You can provide additional annotation, correct errors or omissions, or request the release of your "hold-until-published" record. BankIt or Sequin may be used for updates, or you can request changes as text in the body of an e-mail message. Be sure to give the accession number of the sequence to be updated along with all update information. Send it to:

update@ncbi.nlm.nih.gov

Submitters of a record maintain editorial control of that record. Any third party update information will be forwarded to the submitters of the record for review. Changes will be made to the record only at the submitters' request. If submitters can no longer be contacted, GenBank reserves the right to edit an entry to agree with the information presented in the original publication(s) cited in the entry.

► Submission of ESTs, STSs and GSSs

Batches of ESTs (expressed sequence tags), STSs (sequence tagged sites), and GSSs (genome survey sequences) can be submitted via special streamlined procedures.

► Submission of HTGS Records

The NCBI has developed a protocol for high throughput genome sequencing centers to use when they submit large genomic records (usually Cosmids or BACs). Specialized tools, including fa2htgs and a "genome center version" of Sequin, have been created to help such centers produce these submission files in a convenient way. The HTG page not only provides detailed submission instructions to genome centers, but also informs GenBank users how to access the HTG sequences.

► Confidentiality

Some authors are concerned that the appearance of their data in GenBank prior to publication will compromise their work. GenBank will, upon request, withhold release of new submissions for a specified period of time. However, if a paper

citing the sequence or accession number is published prior to the specified date, your sequence will be released upon publication.

In order to prevent the delay in the appearance of published sequence data, we urge authors to inform us of the appearance of the published data. As soon as it is available, please send the full publication data--all authors, title, journal, volume, pages and date--to the following address:

update@ncbi.nlm.nih.gov

► Submission of SNPs and other polymorphism data

Data on genetic variation in humans and other organisms can be submitted to the NCBI Database of Single Nucleotide Polymorphisms (dbSNP). Entries include single nucleotide polymorphisms (SNPs), small-scale insertion/deletions, polymorphic repetitive elements, and microsatellite variation. dbSNP is a separate resource from the GenBank database, and submissions do not receive GenBank accessions as noted above. However, dbSNP entries do receive dbSNP identifiers and contain links to associated GenBank records. Further information about submitting data is accessible from the sidebar of the dbSNP home page.

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